

Marine Corps Gazette

JUNE 1954

THIRTY CENTS



MORTARS: NECESSITY-NOT SENTIMENT

Marine Corps Gazette

JUNE 1954

NUMBER 6

VOLUME 38

PROFESSIONAL MAGAZINE FOR UNITED STATES MARINES

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Marine Corps Gazette



MORTAR: NECESSITY NOT SENTIMENT

COVER

We're not taking sides in the issue between the base-plate Hatfields and the cannon-cocking McCoys, "we just calls them as we sees them." However, we feel that it is significant to note that when our staff artist, TSgt Stanley Dunlap, passed Weapons Company area on his way to the Class IV dump, he found a crew working out with a brand-spanking new mortar. Dunlap talked to the mortar crew as he made his preliminary sketches for the cover, and they ventured they hadn't heard anything official yet, regarding mortars being placed in the Class IV category. As far as they were concerned—the mortar was here to stay.

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Fix Bayonets!

... re: *Close for the Kill*. Bayonet training is one phase of Marine training that seems to be neglected, especially in staff sections.

... I remember very clearly Item Company, 3/1 making a bayonet charge outside of Yongdong-po and no one, including MSgt Joe Dartez who was in the lead, looked anything

bayonet is the culmination of the aggressiveness that permeates the assaulting unit as it hurls itself into the objective ... in this melee there is little opportunity, or satisfactory ground, for fencing or quarter staffing a la Robin Hood.

L. A. LEMBECK
Maj, USMC

Urbana, Ill.



like the examples in the manual. ...

Get the Corps back to more body-contact training, and there should be an improvement in Marines' personal bearing and confidence.

ALLEN G. MAINARD
SSgt, USMC

San Antonio, Texas

... The 1st Mar Div used practically the same system as long ago as 1944, at Pavuvu, Russell Islands. To the best of my knowledge, it was devised by Colonel Biddle, of whom I am sure you have heard. We knew it as the Biddle "Cut and Slash" system.

H. F. JASTER
TSgt, USMC

Denver, Colo.

... Fundamentally, Dr. Seidler has made a scientific study and restatement of what might be termed a "modified Biddle system."

In short, the true spirit of the

Remington Raiders

... I'm sure that when you printed 2dLt Meek's letter in your April issue you were leaving an opening for debate.

I personally think that the Marine Corps would benefit more by leaving the hill climbing Marines alone and let the Remington Raiders take care of the office work.

J. H. THORNE
SSgt, USMC

Sacramento, Calif.

... I was under the impression that 2dLts were well instructed in office procedure and didn't have to rely on the duty clerk to do their thinking.

"Every Marine a Typist"—I disagree 100 per cent. Just the opposite, "Every Marine a Mud-Marine!" It is basically that way now, and it should stay that way.

R. L. KENTNER
SSgt, USMC

San Diego, Calif.

... In your April issue there is published a letter written by 2dLt Meek in regards to training every Marine as a clerk-typist. Ye Gods! Should there be any "free" time ...



use it to teach the recruit how to punch the "five" ring at 500 yards, not a typewriter key. The profit earned in combat would surely justify the extra instruction.

FREDERICK N. VANSANT
2dLt, USMCR

San Diego, Calif.

White Side Out

... My pet idea is that the inside of pyramidal tents and other canvas tents should be white.

Electric lights and even a candle or kerosene lamp make a good light in a white tent. ...

There would be great advantage in having a white side to turn out sometimes for camouflage purposes.

DONALD P. WEBB
Sgt, USMC

Portsmouth, Va.

ED: MCEB reports that new trends in tent development incorporate Sgt Webb's ideas in the form of tent liners.

Training Aid

... In *Props for the Prof*, April, 1954, TSgt Toolin has done an excellent job on a subject neglected and forgotten for too long. ... In far too many places, the appointing and training of instructors is a haphazard affair and, as a result, the training is the same. When instructors are not well trained and lack enthusiasm for their job the students will learn little, and the hours involved are wasted.

DONALD M. BRUCE
TSgt, USMC

Barstow, Calif.

... To be reminded by his article of the training aids that are available (?) makes most of us in "letter" companies drool with envy. We even



Paratrooper Medical Corpsman on maneuvers administering blood plasma.

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Even in peacetime, it's essential that trained technicians like this paramedic be moved swiftly between assignments. That's why they're flown from one training center to another via the *Scheduled Airlines* — getting "on the job" *five times faster* than by any other way! *Cheaper, too.* The *Scheduled Airlines* save the military millions of vital man-hours — which, in turn, saves millions in pay and per diem dollars. So, next time you're moving one man or many, call a *Scheduled Airlines* representative — compare the costs — the speed — the dependability of *Scheduled* flight with any other means of travel!

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dream of some day having an aid as



simple as a blackboard available to us.

Why can't a medium sized blackboard with a collapsible mount be issued to each platoon?

BRUCE I. CHAPPLE
SSgt, USMC

Camp Lejeune, N. C.

Ready

... Lieutenant Colonel Edwards' article *A Force-In-Readiness* is an accurate account of the Corps' historical mission. In the dim half-light of the pre-World War II period, 1940-41, national planners realized that the Corps constituted one of the few bulwarks in the Atlantic. The nation best remembers the battle streamers won by the Marine Corps during the campaigns in the Pacific; however, in the pre-war period the Corps was readied to protect the integrity of the Western Hemisphere at a minute's notice. And this readiness, while as yet unsung, deserves attention.

Designated for immediate employment in the French West Indies, the Azores and wherever else the hemispheric solidarity was threatened by the Axis, the Marine Corps was readied for immediate movement. While diplomatic negotiations over Martinique continued, the situation in Iceland suddenly required the use of American forces. Since the Army was unable to send its beefed-up (draftee) units outside the continental limits, in compliance with selective service legislation, the 1st Marine Brigade sailed for Iceland.

GERALD DIAMOND

Washington, D. C.

Rapid Fire

... "How many well aimed shots per minute will the M1 fire in the hands of the average man?"

"30 rounds" is given in the *Guidebook for Marines* (Rev. 1 July 53). The *LPM* informs us—"12 rounds." The majority of Marines, particularly those in the lower pay grades, use

the *Guidebook* as their principal source of professional information. It augments their schools and settles their debates.

... Unless the Corps has a new concept of "well aimed fire," the *Guidebook* is in error. Assuming that it refers to well aimed fire under combat conditions, which would eliminate some of the advantages of range firing, we feel that the answer is not only wrong but impossible. In order to fire 30 rounds it would be necessary to have four clips of ammunition. If we assume that the piece is already loaded, we still have to reload three times. The average man would consume nine to 15 seconds reloading, leaving him 45 seconds or one and a half seconds per round. If sight alignment, breathin'an'squeezin' are still shooting fundamentals, who dreamed up this 30 rounds per minute business?

CHARLES D. FOSTER
TSgt, USMC

San Diego, Calif.

"How to the Line . . ."

... *Let's Learn To Write* was excellent. It should be read by all officers. I regret, however, that it did not follow more closely one of the suggested references.

R. W. GLICKERT
LtCol, USMC

Quantico, Va.

... For the most part, *Let's Learn To Write* made good sense.

... Let's raise our writing standards other than by edict from on high. It can be done by improved supervision from those responsible for reviewing and signing correspondence. Demand a higher standard of performance, then (patiently) help those who need it, who realize they need it and are willing to help themselves.

J. B. SWEENEY
LtCol, USMC

Washington, D. C.

... *Let's Learn To Write* had a good message for all of us. But I wonder if the author used one of the "handy" references he suggested in a footnote, i.e., *The Art of Readable Writing* by Rudolf Flesch.

After noting several lengthy sentences (45, 49 and 92 words!) in the article, I broke out Mr. Flesch's pub-



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lication for a check to see if the author was practicing what he preached. He wasn't!

The average sentence length is 22 words. Flesch plugs for shorter sentences. He uses *Life*, *Time*, *Reader's Digest* and *Collier's* as examples.

... I agree with the author in his basic contention — with only minor reservations.

U. S. McINTOCK

Washington, D. C.

... LtCol Mandeville's article was very well written ... but I must rise to battle. ... If we are in need of self-improvement ... let's do it during off-duty hours. My personal opinion is that many officers in the Corps today love to write directives. If the time spent writing these directives ... could be spent with the troops, perhaps we'd have a higher re-enlistment rate and a better Marine Corps.

P. D. REISSNER, JR.
Capt, USMC

Camp Lejeune, N. C.

The Bookshop Has It

... After answering, for I'm sure, the one thousandth time, where I managed to procure my *Manual for Courts-Martial, U. S. 1951*, I decided to write in a suggestion.

Since the adoption of the Code in 1951, it seems that many people are continually in the dark regarding it, and I have heard quite a number of persons state they would like to purchase a copy of the manual for their own use or information.

Why not make it available at exchanges?

FRANCIS M. WARD
SSgt, USMC

Treasure Island

Ed: MCM, 1951 is available through your Gazette Bookshop, \$3.25.

How 'bout 30?

... I take an interest in this magazine ... appreciate it very much ... am planning to stay in the Corps for 20 years ... you have a customer. ...

WALTER GRAY
Pfc, USMC

Camp Lejeune, N. C.

LETTER-WRITERS

Please keep your *Message Center* contributions limited to 200 words or less. If you find that the muse woos you to greater lengths, write an article on the subject. We'll be glad to consider it for publication at our regular rates. Articles 2,500 words or under are particularly desired, but keep letters short.

Right Four, Fire the Corps!

... LtCol Wade's article was doomed to be salvoed by mortarmen and infantrymen. Oddly enough, his own "battery mates" haven't fired in support.

For an artilleryman to enter the sacrosanct area is a felonious assault in itself. However, to approach the subject matter with the purpose of arriving at a predetermined conclusion is to compound the felony. Few, if any, mortarmen will assert that their weapon is perfect and omnipotent. Yet, LtCol Wade ascribes no serious faults or shortcomings to the object of his affection. There is an obvious need to evaluate our present supporting weapons system, but to do it on a unilateral basis is not a proper method. The comparative pros and cons of each should be presented for all to read and evaluate.

The apparent "coup de grace" is administered by the eradicator of evil, the mortar locator system. A certain amount of security awareness should be exercised in connection with this equipment. LtCol Wade implies that every country has such equipment and, ergo, our mortars are doomed. I recall that effective counter battery fire against artillery is not unknown nor unusual, yet artillery is not doomed to be placed in Class IV.

There is little doubt that the article will be productive of some changes, perhaps even the presentation of a point of view to replace artillery by mortars of suitable characteristics.

W. F. FRANK
LtCol, USMC

Washington, D. C.

... Please, gentlemen. I did not question motherhood, just the mortar.

J. J. WADE, JR.
LtCol, USMC

Falls Church, Va.



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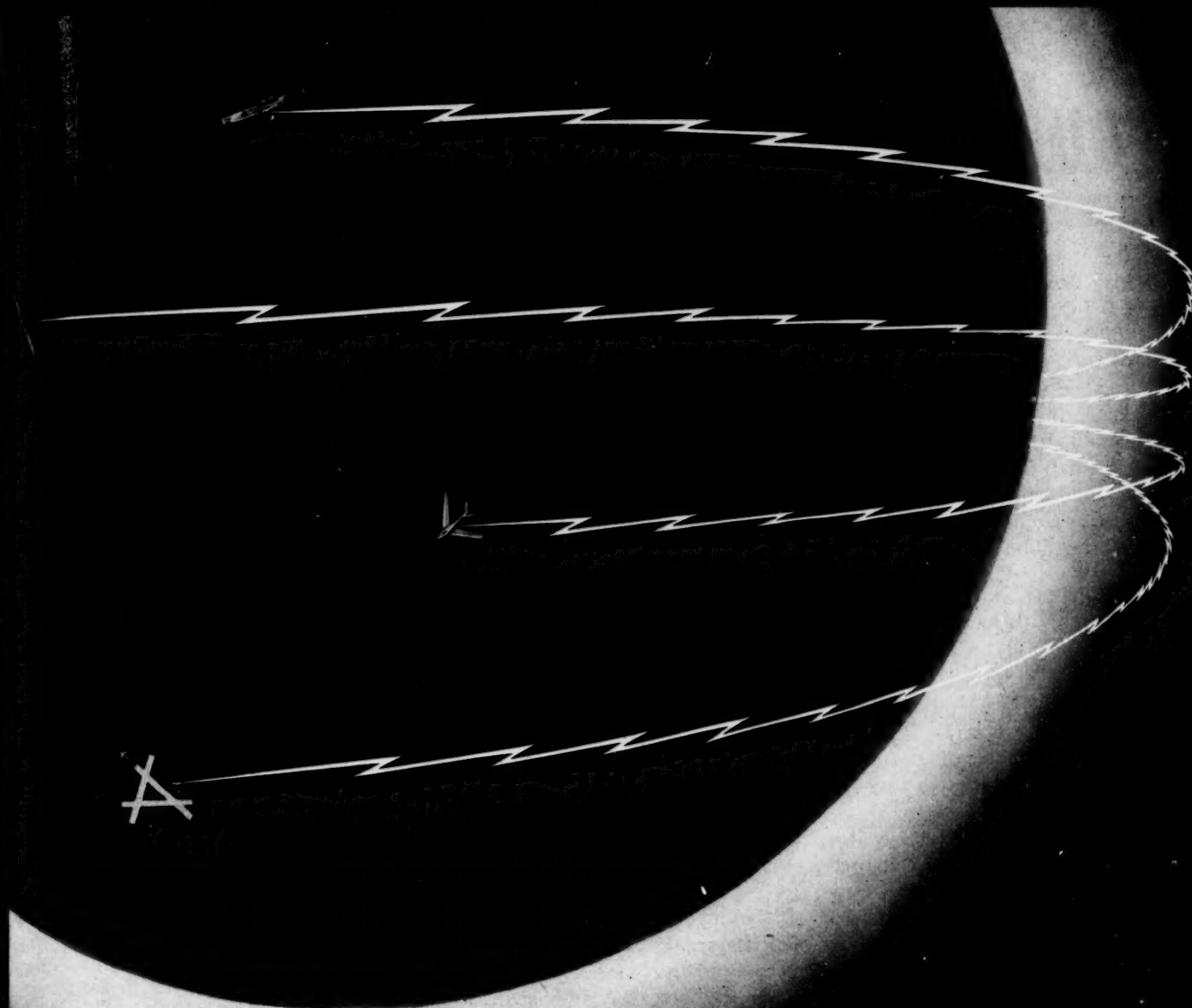
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CAMDEN, N.J.

our authors

British Royal Marine **LtCol D. B. Drysdale, D.S.O., M.B.E.**, received most of the experience that enabled him to write *Special Forces* while involved in intelligence work on the English Channel and in France during WW II. He was aboard the HMS *Renown* in 1939-40 when the German U-boats were on the prowl, and with the Royal Marine Commandos in Burma from 1943-45. The letters after the



LTCOL DRYSDALE

Colonel's name mean he is a member of Britain's Distinguished Service Order and a Member of the British Empire, two of Britain's highest awards for gallantry in action. He was also awarded our own Silver Star medal for action in Korea. Colonel Drysdale recently returned to England after serving as Royal Marine Instructor and Liaison Officer at the MCEC, Quantico, Va.

Colonel **J. D. Hittle's** *20th Century Amphibious Warfare* received an Honorable Mention award in the Association's 1953 Prize Essay Contest, Group One. Colonel Hittle has written previously for the *GAZETTE* and has also published two books. He is presently Legislative Assistant to the Commandant of the Marine Corps.

Former First Sergeant, **1stLt Clifton Rich** has 14 years of service under



1STLT RICH

his belt. Shortly after finishing recruit training in 1940, he attended Parachute School at Camp Lejeune and upon completion joined the 4th Para Bn at Camp Pendleton. He later served with the 26th Marines, 5th Mar Div. Lieutenant Rich wrote *Company Records in Combat* which was published in the March

1952 issue of the *GAZETTE*. This time he offers *Eliminate the Surplus CP* (page 24). The lieutenant is currently serving as a battery executive officer with the 11th Marines in Korea.

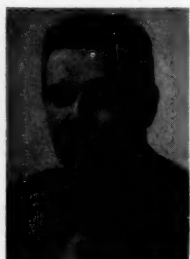
Lieutenant Colonel **Fenwicke W. Holmes** decided to put his supply background to good use writing of some of the problems long encountered by logisticians. Born in Kobe, Japan, Colonel Holmes came into the



LTCOL HOLMES

Corps via the 3d Candidate Class after graduating from UCLA in 1941. From 1942 until 1945, he was assigned to various units in the Pacific. He was awarded the Silver Star for action at Vella Lavella while serving with the 9th Marines, and shortly after went into the supply field. Recently the Colonel was Officer in Charge, General Supply Division at San Francisco. He is currently Director of Instruction, Marine Corps Supply Schools.

In his return trip to the *GAZETTE*, Col **Howard B. Bengé** offers *Consider This Concept* (page 50). Graduated from the Naval Academy in 1938, the Colonel attended the old Basic



COL BENGE

School at Philadelphia and was assigned to an artillery battery in Cuba after graduating. He was Bn Adj at Pearl Harbor at the start of WW II and spent the rest of the war at various Pacific islands. Following the war, he was CO, Hawaiian Detachment, on Oahu, and later was Staff Officer for Marine matters in the Ass't Sec Nav (controller) office in Washington. The Colonel is presently Head of the Budget Branch Fiscal Division, Headquarters Marine Corps.

Author of *H-Hour — AT Guns, Not Tanks*, **LtCol F. S. Aldridge**, entered the Corps through the PLC program at Colgate University and completed Basic School in 1941. His first assignment was overseas with

the 1st Mar Div and after a brief stint as artillery and aerial observer instructor at Quantico, he returned to the Pacific—this time to the 2d Mar Div. Author of numerous *GAZETTE* articles, the Colonel recently left for duty in Korea after instructing in the Tactical Section, Senior School for three years.

Now released from active duty in the Marine Corps, former **Cpl William G. Bruce** digs back into



CPL BRUCE

history to give us *Battle of the Crater* on page 36. Graduated from the University of Richmond with a B.A. degree in History, Bruce entered the Corps in 1951, then served with the 10th Marines and Motor

Transport School at Camp Lejeune.

When **LtCol John J. Wade's** *Of Mortars and Men* appeared in the January issue of the *GAZETTE*, it started a chain reaction of rebuttals. One of the first was *Necessity — Not Sentiment* by **LtCol Brooke Nihart** (page 44). It expresses his respect for the weapon he had numerous occasions to use as a Bn CO in Korea—the mortar. The Colonel is currently attached to the Personal Affairs Branch, Headquarters Marine Corps.

Technical Sergeant **Michael Soley**, author of *The LMG Squad* was aboard the ill-fated USS *Arizona* on December 7, 1941. After the sinking, he was transferred to Marine Bar-

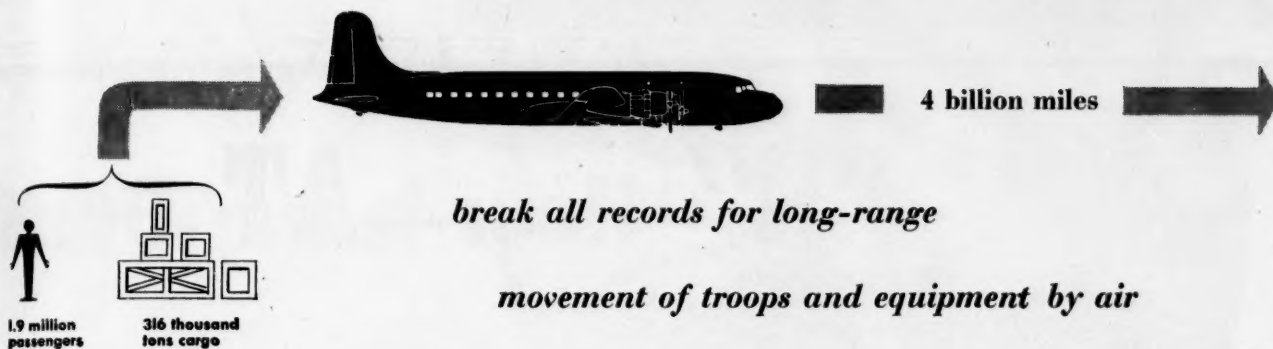


TSGT SOLEY

racks, Pearl Harbor and remained there until 1943. From 1944 until the war in Korea, he served at Balboa, Canal Zone, in the Philippine Islands and in Hawaii. Sergeant Soley took part in the Inchon land-

ing and the Chosen Reservoir campaign. He was awarded the Bronze Star while serving as a section leader in a machine-gun platoon during those initial campaigns. Not satisfied with one tour in Korea, he has recently returned there as a mortar section sergeant in the 5th Marines.

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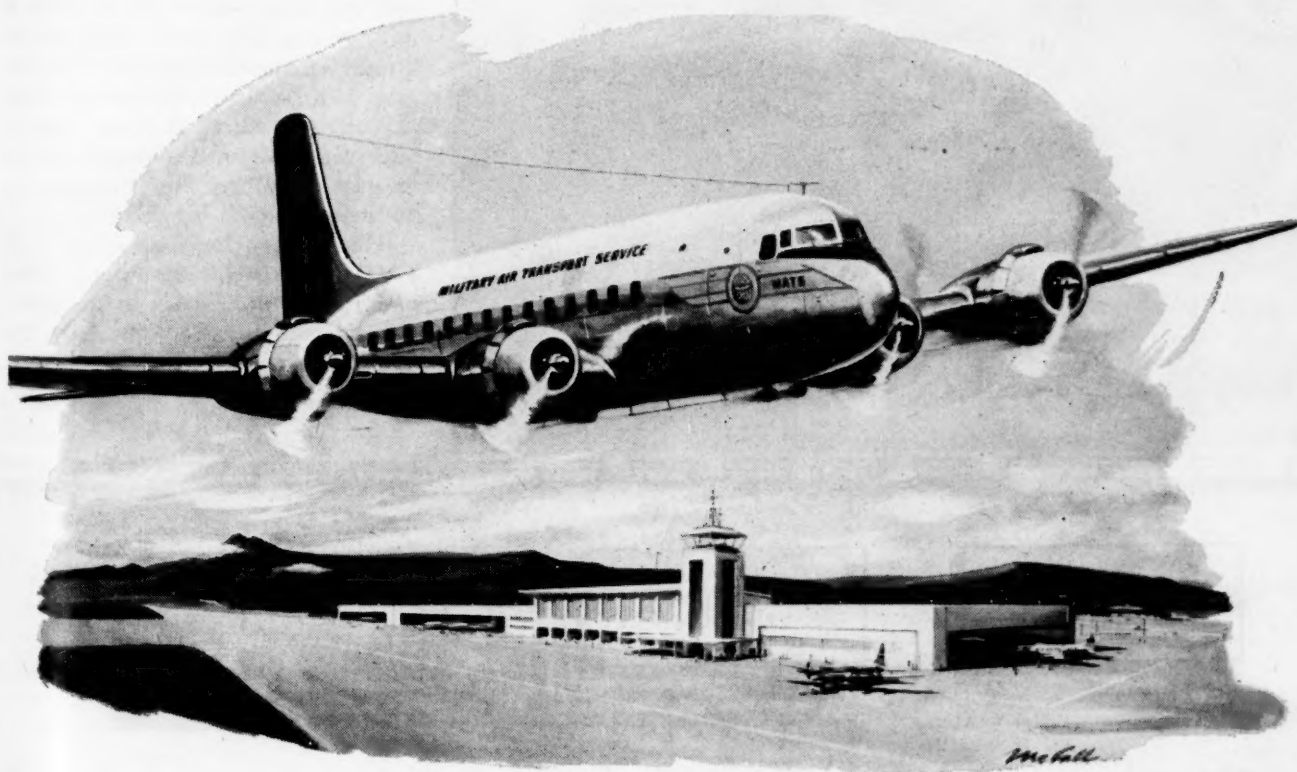
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1954



"H" Hour—AT Guns,



“SHALL WE LAND THE TANKS early or shall we land them later?” We’ve been asking that one for a long time. If we land tanks in the first waves of the amphibious assault they may get knocked out by a pillbox, by anti-tank mines, or by an enemy bazooka-man who hadn’t been flushed out of the brand new beachhead.

If we bring the tanks in *later*, it may be too late. A real tank thrust by the enemy during the early minutes of a landing could sweep infantry already ashore into the sea, attack the waves still moving into the beach, and delay and threaten the entire landing.

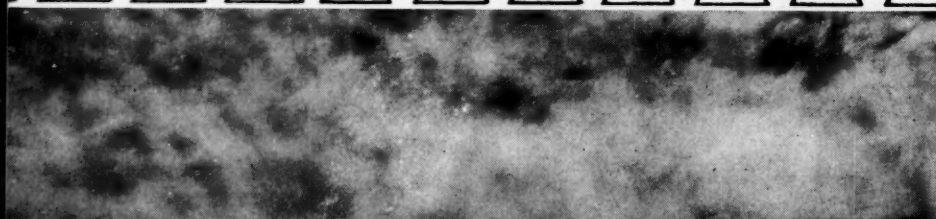
Here’s the whole sad story:

(1) *We need something to stop the enemy tanks early in the game.* During the invasion of Sicily, the Germans counterattacked the 1st

105
RECOILLESS CO
(INFANTRY REG'T)

RECOILLESS
PLATOON

RECOILLESS SECTION
(2 squads, 1 gun
per squad)



By LtCol F. S. Aldridge

ns, Not Tanks!



Inf Div beachhead at Gela with tanks. It was D+1 but according to BrigGen Teddy Roosevelt, the ADC, the American forces *still* had no anti-tank protection. The Germans attempted to push the Seventh Army into the sea before the beachhead was consolidated. The tank attack was a good gamble but, because the Germans didn't send accompanying infantry with their tanks, it failed. If they had tried the same attack on D-day when the American forces were weaker, it may well have succeeded.

(2) *We've been saying for years that there's nothing like a tank to stop a tank.* But is that entirely true in amphibious attacks?

(3) *If we bring the tanks in early they may get picked off one by one without ever seeing an enemy tank.* And how would they get picked off?

Take your choice—there is the enemy tank that would like nothing better than to attack our tanks when they are waterborne and relatively helpless; or there could be an anti-tank gun, unharmed by naval gunfire and air, not overrun as yet by the infantry. At Guam, a well sited AT gun on the flanks of the landing beaches took out LVTs and LVTAs in batches when they were still waterborne. That's what one AT weapon can do. And the tank coming ashore in an LCU (or what have you) is a better target than the LVT family of amphibious vehicles. Or the tank landed too early may

have to wade its way through a minefield still not cleared by the engineer clearance teams.

What's the answer?

There is an answer, *but it isn't the tank!* For some years the tank strength of the Marine Division has been growing. On the surface, more tanks may appear a good idea—hasn't the tank strength of our potential enemies increased? It has, but that's not the question. Why has the tank strength of the Marine Division increased? The mission of the Marine Corps hasn't changed. We're still *the* amphibious troops. We're not an armored division.

We need something that's cheaper, better and lighter—

and even more important—something we can get ashore in time



Coming in—sitting ducks!

And we can't be both amphibious and armored.

If we want the Navy to get us (the Marines) ashore on D-day and not D+5, we will have to continue to look closely at the Navy problem of lifting us. The Navy will have simultaneous world wide commitments on the very day we may call "D-Day"—and these commitments all take ships. To land tanks takes lots of ships—and special kinds of ships. The Navy can get an amphibious outfit ashore pretty much when, where and how we want. But if we are going to play "armored division" on D-day . . .

Every time throughout history when military men tried to shape a military instrument to fulfill two objectives at once, it wasn't much good for either job. Remember the story of the armored cruiser. Battleships could sink it and cruisers could out run it. The Marine Division isn't an armored cruiser nor is it an armored division; so let's look for our anti-tank answer in a different direction than the tank.

Certainly we need tanks as part of the tank-infantry team, and we can get them in for that job. But the question that *must* be solved is—what do we do to stop enemy tanks during the first hour of landing?

Let's look at the characteristics required of the needed weapon. It

should (1) Have a pretty good range—a couple of thousand yards. (2) Be available in numbers. (3) Be small enough to get ashore in readily available types of landing craft, or in an LVT.

Take number (1)—the requirement for range. That knocks out the 3.5 rocket launcher as the complete solution—leaving it for what it is—a good, short range, AT weapon.

The second requirement is numbers. The average beachhead is a good sized area and the enemy can take his choice as to point of attack. Perhaps, because of beach conditions, our tanks are landing "down the beach a ways." We need enough AT weapons to cover the beachhead in width and in depth. An occasional tank trickling in across the beach doesn't meet this requirement.

Requirement number (3) is the most desired of all characteristics. It can be paraphrased to read—we need a weapon that will be on the

Are we going to play 'Armored Division' on D-Day?



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They may get picked off one-by-one

beach when we need it—a shortage of special type landing craft or the presence of enemy minefields notwithstanding. An AT weapon, or any weapon for that matter, does us no good in the assault if it is on an LST, or is knocked out during the ship-to-shore movement, or when it first gets on the beach. At Normandy, in one RCT sector, only 16 out of 48 tanks reached the beach. And until our supporting weapons, prior to H-hour, can take out everything that can shoot back, we are going to take losses from enemy guns. The conclusion here is obvious—the more light anti-tank weapons we send in to the beach, the more we are going to have in there at the right spot to stop enemy tanks.

Do we have any weapons that fill these requirements? We do—the 75mm recoilless rifle, or better yet the 105mm recoilless. In this weapon, mounted on a jeep or a light tracked vehicle, we have an answer. And a good one.

After the landing beaches are secured and the tanks themselves are ashore, is there still a need for our “H-hour anti-tank weapon?” Or will we have to load it back aboard ship to await the next assault landing? Not at all—we need the jeep or track-mounted 105mm recoilless every day of combat—and here’s why: Our present equipment leaves a gap in our anti-mechanized defense between the bazooka and the 48-ton tank—a gap that leaves us wide open to anti-mechanized attack from H-hour until the area is secured. We do have the 75mm recoilless. Unfortunately our present organization and T/E doesn’t permit this weapon to exercise its true potential. We

don’t have enough 75s nor has this weapon been given sufficient means to provide for its mobility or ammunition resupply. The 75mm recoilless could be an answer to our requirements for a middle distance AT weapon. But this weapon would be satisfactory only if we had enough of them; only if we adequately provided for mobility and ammunition resupply. An even better answer than the 75mm recoilless is the 105mm recoilless unit properly organized and equipped.

There’s the requirement for the weapon and there’s a solution. Now, for the organization of the “105mm Recoilless Company” of the Marine infantry regiment. The Recoilless Company should be organic to the regiment since it will replace our present regimental level anti-tank weapon—those few tanks presently

“stuck” in the T/O. Replace the regimental tanks because these orphans have inadequate maintenance facilities at the infantry regiment—the tank retrievers, all the tank maintenance know-how and facilities are with the division tank battalion. Replace them because we can’t get enough of them on the beach in time to do any good anyway. The 105s must be organic to the regiment in order to fill the anti-mechanized void between the tanks of the division tank battalion and the 3.5 rocket launchers of the infantry battalion and company.

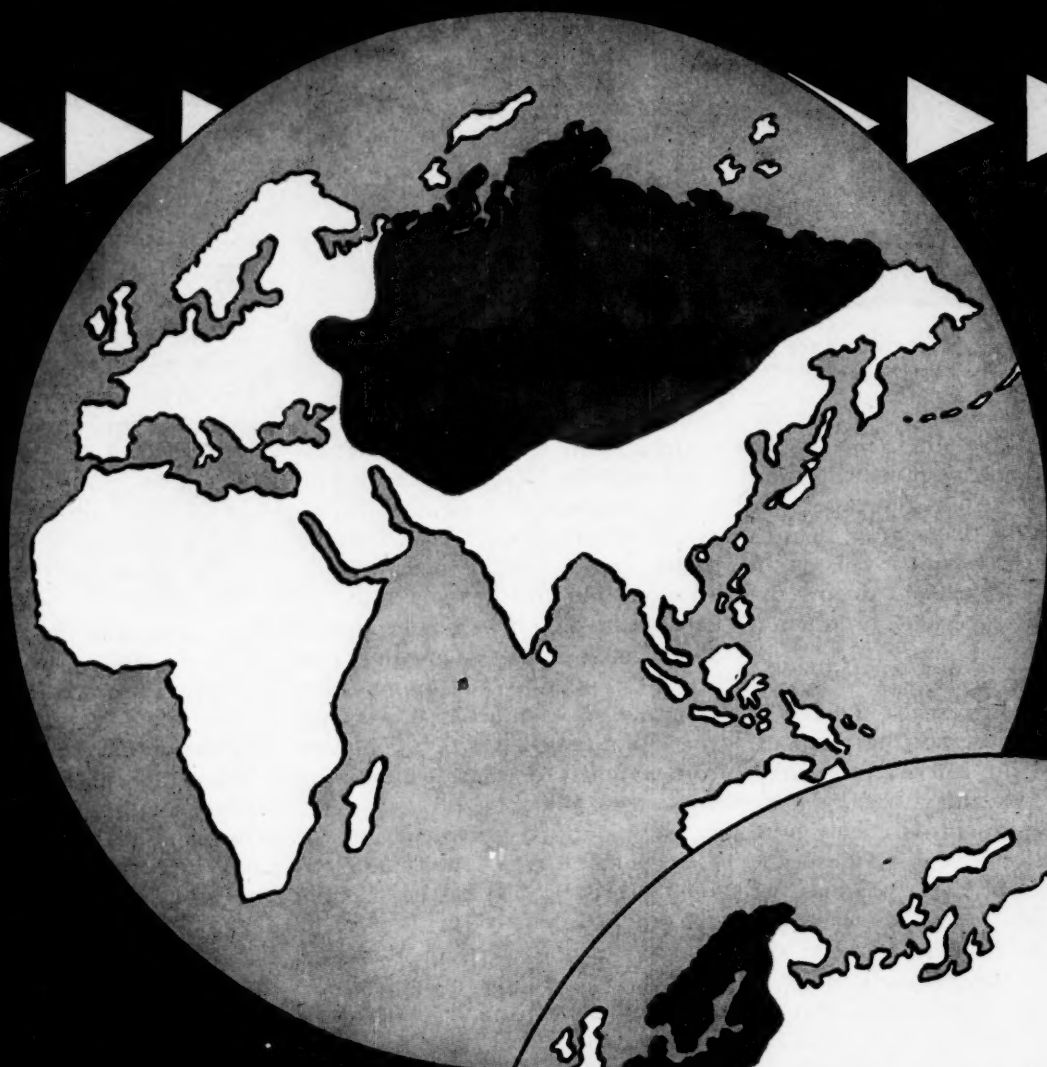
And that isn’t all. Even though the subject is anti-mechanized defense, this weapon and this organization can give the infantry a potent weapon for all manner of other direct fire and indirect fire missions in offense and defense.

Why have we been arguing for years when to “land the tanks?” Why have we been shaking our heads in dismay when we couldn’t find the ships and craft to bring the tanks in; or when we visualized minefields on the beach? Certainly there will be losses on the way in—that’s why the enemy bought his AT guns and his mines. But let’s not give him a bigger, more expensive target at H-hour than we already have. Forget the early landing of tanks for the middle distance anti-mechanized role. Let us use something that is cheaper, better and best of all, something we can get ashore in time.

US & MC

It hit a mine—what good is it now?





MARINE CORPS
PRIZE ESSAY CONTEST



(field officers & civilians)

*Honorable
Mention*

ASSOCIATION

AMPHIBIOUS WARFARE

By Col J. D. Hittle

PERHAPS THE MOST PARADOXICAL feature of 20th Century military thought has been the frequency and willingness with which fanciful prophets of war have attempted to relegate amphibious warfare — and the Marine Corps — to the ash-can of military obsolescence. The frightful naivete of such efforts could be equalled only by the deeply grave effect acceptance of such views would have upon our national security, and even the ultimate fate of western civilization itself.

As America passes through a turbulent mid-point and moves into the last half of a crisis-fraught century, it seems an appropriate time to reflect upon the modern background of amphibious warfare and the broad currents of world events which, in final analysis, should determine the future requirements for an adequate, combat-ready Marine Corps possessing its characteristic amphibious proficiency.

Repeatedly, since the turn of the century, some elements of military thought have sternly, but wrongly, judged amphibious operations as an impractical instrument of war. Such rejection of amphibious warfare has not been limited to a particular military element or any one nation. For instance, in the hey-day of its prestige between the Franco-Prussian War and World War I, the Great German General Staff, planning the conquest of Europe and the defeat of sea-power England, refused to undertake the task of developing an ade-

quate amphibious warfare doctrine. In that era there were those in Germany who sensed the ineludable fact that any nation intending to carry war beyond the narrow confines of the European shores must, of strategic necessity, develop a strong amphibious capability. One of those who grasped this historic truth was the "non-conformist" pre-World War I chief of German engineers, General von der Goltz. He perceived the value of a strong amphibious capability for a nation engaged in war against England and her overseas empire. Convinced of the validity of his view, he urged experimentation in amphibious operations.

His efforts, however, brought no meaningful results. The Great German General Staff, imbued with a land-locked philosophy of war, failed to heed his admonitions. Neither the Chief of the Great General Staff, von Schlieffen, nor his successor, von Moltke (the younger), evidenced an appreciation of the importance of amphibious operations.

Rebuffed in his efforts to induce greater amphibious interest in the Great General Staff, von der Goltz sarcastically observed that an amphibious section in that all powerful staff "would be starved to death, if only for the reason it had not sprung from the great tent-show's own brain!" Such an observation seems to be, in retrospect, a valid understatement of the kind of land power thinking that kept German strategy in World Wars I and II estranged



England — spasmodic interest, but no doctrine

from the sea, and which deprived German arms of the strength that would flow from possession of an amphibious capability.

Quite surprisingly, in that same pre-World War I period, England, the dominant sea power of the world, failed to sense the logically important role that amphibious operations should play in her conduct of war. Although there was spasmodic interest in landing operations, no concise and adequate doctrine was evolved. Moreover, the need for such knowledge was not realized by those in whose hands the fate of that great maritime empire would soon be placed. For a nation whose wealth and destiny rested on sea power, British military thought had failed dismally to appreciate the strategic advantages that are so inherent in the unsurpassed mobility of sea power.

As a result of such views, the Committee on Imperial Defense proceeded to state that Navy plans for landings against Germany on the Continent were, "from a military point of view, hopeless because the railroad system, which the Great General Staff of Germany had evolved, was such that any division we landed, even if the admiralty could have got it to a point suitable for debarkation, would be promptly surrounded by five or ten times the number of enemy troops."

Such an evaluation, casting deep doubt on the ability of the world's then greatest navy even to reach the objective area, reflected little faith

in British naval supremacy and the historically proven capability of sea power. It also seemed to be impressed more with the specter of Napoleonic method as expressed in Jomini's emphasis on interior lines than by the potentialities of amphibious operations by the world's largest fleet.

But that was not the only instance in which British military thinking crossed off amphibious operations during that crucial period just before World War I. As British strategy began to crystalize in those pre-war years, the critical importance of the Dardanelles was readily recognized. Consequently, in 1906-7 top British planners considered the possibility of conducting an amphibious operation in that vicinity. As if taking their cue from the land-power minded Great German General Staff, the British Army General Staff expressed doubt if such an operation was even feasible. Naval thought, however, considered such views as underestimating the possibilities of such an amphibious operation.

Unfortunately, British General Staff opinion prevailed, and the Committee on Imperial Defense determined that an operation against the Gallipoli Peninsula would involve such risks that it should not be undertaken except as a last resort.

This British write-off of amphibious capabilities was loaded with long range disaster. The result was that since the operation was not considered feasible, no concerted attention was devoted to planning for such an eventuality. Thus, when Kitchener

ordered a surprised General Ian Hamilton to command the military force to land on the Gallipoli Peninsula, there was no British amphibious doctrine for Hamilton to turn to. In fact, there was no advance staff planning, no useful intelligence and only the vaguest of maps.

In spite of these deficiencies, the British almost succeeded at Gallipoli. So narrow was the margin between victory and defeat, it appears justifiable to conclude that if the British forces at Gallipoli had been the beneficiaries of a reasonably adequate amphibious doctrine, those forces would have persevered through to victory.

While British failure at Gallipoli was disastrous in terms of the Allied war effort in World War I, it also exerted an unfortunate influence on military thought by helping continue the long-standing European disdain for amphibious warfare. All of which served to confirm the belief that amphibious operations had no place in the 20th Century scheme of war. Such a conclusion was, of course, the result of a series of misconceptions:

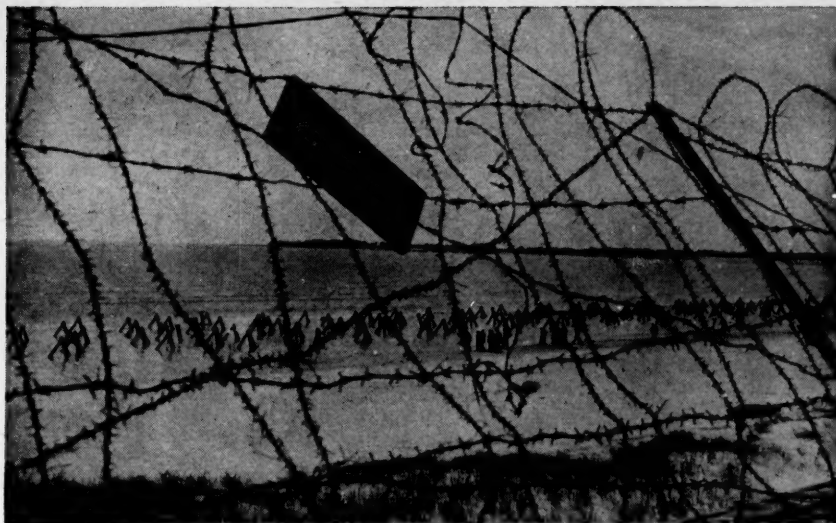
Prior to World War I, prevailing military thought decided amphibious operations unfeasible; therefore, no preparations were made to conduct them. Because no doctrine had been prepared, the British failed at Gallipoli. Since Gallipoli was a failure, post World War I European military thought continued to judge amphibious operations as impracticable. So they laid it to rest.

But United States



In keeping with the traditional European tendency to view naval power in the specialized sense of ships vs. ships, there was an accompanying failure by European military thought, in the years following World War I, to visualize the strategic advantages that would stem from the application of sea power through amphibious operations in the seizure of land objectives. This basic strategic deficiency can not be attributed to any single European power. Gallipoli taught a common lesson of failure to German, French and British military thinking. The consequence of this widespread and gratuitous write-off of amphibious operations was that no European power entered World War II with a practical and adequate amphibious knowledge.

Germany paid for her General Staff's land-locked thinking when the Nazi legions stood on the channel coast looking out across the ribbon of sea toward the chalk-white cliffs of Dover. The German General Staff's knowledge of such battle methods stopped at the waterline. Having driven the British into the sea, German leadership was unprepared to pursue them to their island sanctuary. As a vulnerable England awaited the cross-channel assault, German General Staff planners were bumbling through an attempt to improvise an amphibious doctrine to carry the assault to England. But, as the British learned a quarter of a century before at Gallipoli, the absence of a sound, long considered



The German General Staff's knowledge stopped at the waterline

amphibious doctrine cannot be rectified by frantic on-the-spot improvisation. The strategic sin of failing to understand the versatility, power, and inherent mobility of a sea power as applied through amphibious operations cannot be expiated by regret. Especially when a nation stands, as did Germany on the channel coast, literally and figuratively missing the boat at her moment of greatest opportunity.

While England profited from German lack of amphibious knowledge, she too suffered a crucial reverse in World War II as a result of failing to develop an amphibious doctrine and the appropriate forces to exploit her superior sea power. The German invasion of Norway offered England an opportunity to exploit her sea power in the defense of Norway. Naval power gave her the ability to conduct a naval campaign with amphibious operations against the Norwegian coast. Because the ghost of Gallipoli exerted such a strong influence over British military thought, Great Britain, so powerful on the sea, lacked the amphibious doctrine and organization to enable her to project her power from the sea against a land objective.

The significance of this British deficiency did not escape the late Secretary of Defense James Forrestal, who pointedly summarized the British failure in Norway by stating: "This disaster, which profoundly affected the course of the entire war, was more than the failure of 16,000 men, but was the failure in the exer-

cise of sea power on the part of the then largest Navy in the world, and it was entirely due to the lack of a small, specially trained amphibious force such as we have in the form of the United States Marines, to supplement ashore the action of the fleet at sea."

While England and Germany matched each other's strategic losses resulting from lack of amphibious knowledge, the United States entered World War II suffering from no comparable deficiency. This American ability to project military forces from the sea against land objectives was, in the light of World War II events, a truly decisive weapon.

As the history of the last war comes into clearer historical perspective, there is abundant reason to consider the United States amphibious know-how to be the pre-eminent "secret weapon" of that great conflict. In a real sense, though, it was more than a "weapon"; it was a broad method of war, and its surprise element derived from the European belief that it was a method of war which was not feasible in the technologically advanced environment of 20th Century combat.

It would, however, be quite erroneous to conclude that the amphibious knowledge, which so decisively benefited our cause in World War II, was the result of any accidental development or momentary inspiration on the part of American military thought. Nothing could be further from the truth. The fact of the matter is that there has probably

State ... had the formula





From the Spanish American War — significant lessons

never been a war method so consciously conceived and deliberately developed as has been American amphibious doctrine. It was in those years marking the close of the 19th Century and the beginning of the current one that our modern amphibious doctrine finds its inception.

While European military thought was writing off amphibious operations, Marine Corps and Navy thought in the United States was accurately appraising the significance of certain lessons that had emerged from the Spanish-American War. Instead of dolefully contemplating the unparalleled confusion that attended General Shafter's landing at Siboney and "logically" interpreting that fiasco as proof of the impracticability of large scale amphibious operations, the Marine Corps and Navy focused their attention on the landing that took place south of Siboney, at Guantanamo Bay. There, the landing was accomplished by an integrated task force of surface vessels and an amphibiously trained Marine Corps landing force. All of the task force was, in keeping with the essentially naval character of amphibious operations, under naval command.

The efficient seizure of the Guantanamo Bay naval base by the integrated Navy-Marine task force contrasted sharply with the landing by Shafter's command at Siboney. While the significance of the Guantanamo Bay operations escaped the land power elements of American military thought, it did not escape Marine Corps and Navy leaders who grasped the two fundamental truths pointed up by the action at

Guantanamo Bay: first, that amphibious operations against a hostile shore were practical; and second, that the integration of specially trained Marine Corps landing forces into the fleet structure was a simple, logical and powerfully effective concept for the exploitation of our national sea power.

✿ AS LOGICAL as was the idea of integration of major Marine Corps amphibious specialist units into the fleet structure, it was an innovation to military thought. Moreover, acceptance of such a concept marked a sharp departure from European precedent which traditionally resisted moves toward such integration of landing and surface forces. This, therefore, led to the rejection of the kind of naval organization that would have stimulated the development of amphibious forces and doctrine.

Thus, from the lesson of Guantanamo Bay developed the peculiarly American concept of the balanced fleet. In accordance with it, U. S. naval policy accepted Marine Corps landing forces, and later the airplane, as integral components of our naval power.

With the inception of the balanced fleet and a faith in the need and practicability of landing operations in future war, U. S. Marine and Navy thought passed into the early years of the 20th Century, a period which can well be termed the "era of amphibious awakening."

World War I did not provide U. S. armed forces with a requirement for amphibious operations.

This, coupled with failure at Gallipoli, resulted in a willingness to write-off amphibious warfare as a prime, or even necessary, national combat capability.

However, in contrast to the almost unanimous negative European reaction to Gallipoli, there was some strong opposition to rejection of amphibious warfare in this country.

Among the few, but important, voices raised in defense of amphibious operations in that period of confused military thought following World War I was that of Major



General John A. Lejeune ... prop

General John A. Lejeune, Commandant of the Marine Corps (1920-29). Lejeune warned that the pattern of future war must not be predicated upon the peculiar nature of World War I, and he pointedly emphasized need for amphibious forces in a future war. World War II, it should be observed, heavily underlined the prophetic accuracy of General Lejeune's admonition. Strengthened by General Lejeune's intellectual leadership, the Marine Corps, after World War I, entered into a period of intensive study of amphibious problems.

While European and a large element of U. S. military thought pointed to Gallipoli as proof of the impossibility of successful amphibious attack against a defended shore, the Marine Corps analyzed the Gallipoli operation for the purpose of determining what had been done incorrectly and then proceeded with

the study of how those errors could be rectified. Such rationalization of Gallipoli further convinced Marine Corps amphibious students that the mistakes at Gallipoli could be avoided and a practical amphibious doctrine was attainable. Thus, the British defeat at Gallipoli led to two distinctly different lines of military thinking. To Europeans and much non-naval American military thought, it was accepted as confirmation of a belief in the inadequacy of amphibious operations; to the Marine Corps and the Navy it pointed the way to



After World War I—Marines made an intensive study

Yet, just as the false indictment of amphibious war was reaching a climax, Communism marched southward on the Korean Peninsula. Once again victory depended on realism rather than theory. Once again, this time at Inchon, amphibious warfare played a decisive role in modern war. Once again, the write-off of amphibious warfare had been proved an incorrect evaluation of the balanced fleet concept.

Those elements which disparage the value of an amphibious capability in the 20th Century are again failing to recognize the basic factors of world strategy. The arguments against amphibious warfare, a strong combat-ready Marine Corps, and powerful naval forces are based upon certain fundamental fallacies:

First of these fallacies is the often voiced assumption that the atomic age has sounded the death knell of amphibious warfare. This is the same kind of false judgment that European military thought passed on amphibious warfare at a time when the machine-gun and fast firing shore batteries were supposed to have made assault landings impracticable. But, it was forgotten that the technology of war moves forward on a broad front. No one weapon can for long outdistance the other offensive and defensive instruments of war.

As a result of the advances made in the capabilities of rotary winged aircraft, the Marine Corps developed the concept of amphibious assault by transport helicopter. This concept, which eliminates the concentration of shipping and the slow

ship-to-shore movement, provides a practical method of conducting the amphibious attack against the threat of atomic weapons.

Once again a strong Marine Corps, entrusted with a landing force development function, has paid tremendous dividends in national security. Armed with the concept of amphibious assault by transport helicopter, the United States continues to possess the ability to apply her sea power, through amphibious operations in the atomic age.

Another fallacy in the arguments of those who doubt the appropriateness of amphibious warfare involves an assumption that the issue will be decided in an all-out, atomic clash between the Soviet Union and the United States.

Such military thinking, based on a "one-enemy, one kind of war" concept, presupposes the inevitability of a great Armageddon. In so doing, it commits the inexcusable military error of assuming an enemy intention instead of basing military policy on potential enemy capabilities.

✿ WHILE THE atomic war of mutual destruction must be recognized as a possibility in the future, it is by no means the only course of action open to the Communist planners. To be prepared for such an all out war is necessary, but to prepare for only an all out air-atomic conflict would be disastrous. It would be disastrous because its success would depend on the enemy choosing a course of action that we "expect" him to choose; it would give the enemy a choice of his many weapons, only



prophetic accuracy for WW II

attainment of a practical amphibious doctrine for modern war.

The result was a Marine Corps-Navy doctrine that made possible the projection of American and Allied military power against the Axis powers. In World War II, fought on a truly global scale, amphibious operations conducted in accordance with a doctrine so deliberately evolved by the Marine Corps and the Navy, were the key to victory.

History may not repeat itself, but man has demonstrated a surprising willingness to repeat his mistakes. Nowhere has this unfortunate tendency been more apparent than in the matter of amphibious warfare. Hardly had World War II victory been achieved than a large element of military thought again manifested its gratuitous willingness to declare amphibious warfare—and naval power—obsolescent and unresponsive to requirements of modern war.

one of which we would be prepared to fight against. Furthermore, there is no reason to be certain that after the first terrible exchange of atomic bombs, the conflict wouldn't settle into a drawn out battle of attrition—a struggle for overseas strategic materials which would re-orient the strategy to maintenance of sea lanes and the accompanying necessity for defense and seizure of bases. Such a sequence of events would demand, once again, a high order of amphibious capability.

Also, those who doubt the need for amphibious warfare and a combat ready Marine Corps fail to sense the essential nature of Russian expansion. All too frequently the detractors of naval power point to the fact that Russia is a land power and therefore conclude that sea power is an ineffective weapon to combat Soviet expansion.

Such opinion as to the almost irresistible superiority of Russian land power and the attendant minimization of western sea power stems, in large part, from Mackinder's dictum that "who controls Eastern Europe rules the Heartland; who rules the Heartland rules the World Island; and who rules the World Island rules the World."

Obviously, in the light of Russia's control of the Heartland, Mackinder's dictum can be little more than a dirge of defeat for the non-Communist world: If Mackinder was right, about all the free world can do is fight a rear guard action against the advance of world Communism. Because of its emphasis on the primacy of land power, the dictum provides a handy argument for those who would, once again, write off the need for a national amphibious capability in countering the Red threat.

Although Mackinder's views have had wide attention, he is by no means the only geographer who has contemplated the perennial problem of resisting the historic Russian push to the sea. One who thought deeply on this subject was the late Professor Nicholas John Spykman of Yale University. Professor Spykman, acknowledged as one of the greatest geographers of modern times, concluded that Mackinder's Heartland theory was geographically unsound. While Spykman warned against strategic slogans as over simplifications,



Soviet Marines—an amphibious awakening in the Heartland?

he contended that if there had to be a slogan for world politics it should be an emphasis upon the importance of Eurasia's periphery. He expressed the concept in the terse sentence: "Who controls the Rimland rules Eurasia; who rules Eurasia controls the destinies of the world."

These views of Spykman are not repeated here merely because they express a geographical concept differing with that of Mackinder. Rather, Spykman deserves attention because he perceived the fallacies of the Heartland theory; and in so doing, set forth a geographical thesis that pointedly emphasizes the indispensability of strong naval power in combating the Communist expansion in the years ahead. In his profound, but unfortunately little known work, "The Geography of the Peace," can be found the intellectual rationalization of world strategy that is so sorely needed to combat the fuzzy military thinking. This thinking, influenced by Mackinder's Heartland theory, writes off naval power and amphibious warfare as unnecessary instruments of our national security in this last half of the 20th Century.

What is so apparent, and yet so often forgotten, is the strategic fact that because of its geography, most of Eurasia's Rimland (with the possible exception of the area dominated by the North European Plain) is more

susceptible to control from the sea than from the land. Even Russian expansion over the North European Plain would be extremely sensitive to sea power projected from the Plain's Baltic flank. Significantly, nowhere else in Eurasia is there a similar land breach in the natural barriers separating the Rimland from the Heartland.

Today as in the past, Russian effort to penetrate the periphery of southern and eastern Asia is impeded by vast deserts and great mountains. Such obstacles are not insurmountable, but they do constitute strong barriers against the outward thrust of landpower from its Heartland base.

This strategic principle has been repeatedly demonstrated. A Tsarist dream for conquest of India in the latter 19th century was rudely shattered by the rigors of campaign in the mountainous land approaches to India's northwestern frontier. Yet, in those same years British sea power was consolidating England's control of all of India. While weapons and methods of war have changed, there is still a meaningful lesson to be gained from recalling that it was England's maritime encirclement of the Eurasian landmass that so effectively blocked the 19th Century Russian thrusts to the seas.

Later, even after Russia completed her Trans-Siberian railroad, Japan

proved in the Russo-Japanese War that sea power was the master of the Heartland's land power in the Eastern Eurasian Rimland. Again this same lesson emerged from the recent Korean War. All of which goes to illustrate how the realities of geography minimize the theoretical advantages of Russia's central position on the Eurasian land mass. In the main, that central position is, because of geographical barriers, closer to a position of isolation from the periphery of Eurasia rather than one of ready accessibility to it. This means, therefore, that sea power, not land power, is the key to future resistance of Communist expansion through most of the remainder of Eurasia. The bulk of the vital Rimland is today, and will be in the remaining years of this century, amenable to control by sea power.

In turn, this emphasizes the need for a combat-ready Marine Corps since the application of sea power in seizure or control of a land area presupposes an adequate amphibious capability. As long as Communism can strike outward toward the extremities of Eurasia, it will be sea power, with its amphibious operations, that will serve as the fire brigade in preventing Communism from breaking out onto the relatively narrow but vital Eurasian Rimland. Korea was the first of such incidents in the post-war 20th Century. It would be wishful thinking to expect that it would be the last. Anyone who indulges in such happy theorizing not only overlooks the

persistence, patience and determination of Communist methods, but he also ignores the configuration of Eurasia's periphery.

Today, as in the past, it is the peninsulas that become the focal points of Eurasian conflict and constitute the areas of decision. Korea, again, is the latest example, but it has been preceded by many other peninsulas that were the scenes of decisive military activity. The Iberian, Scandinavian, Danish, Cherbourg, Italian and Hellenic peninsulas have all demonstrated their important strategic influence on European affairs. The Indo-Chinese, the Malay and the Burmese peninsulas are present focal points of eastern conflict. Even the most casual examination of the map discloses the almost endless number of potential peninsular trouble spots. The strategic meaning is clear. Each Eurasian peninsula is, in varying degree, another Korea. This, of course, relates directly to the need for balanced fleets with strong Marine landing forces. Balanced naval power has repeatedly proven its unique effectiveness in peninsular operations.

The critically important role of the Rimland in the years ahead points to an even greater need for sea power with adequate amphibious doctrine and forces in the future. Only sea power possesses the flexibility and mobility to react quickly and adequately in the great distances of Eurasia's periphery.

While air power will unquestionably play an important role in such

areas, the base of the Western World's ability to hold the Rimland must rest in sea power. This stems in part, not only from sea power's superior strategic mobility and logistic sufficiency, but also from the fact that sea power can be applied in varying degrees, whereas the application of air power is essentially the blast of a bomb. That destructive blast, in spite of its material effectiveness, may well be highly inappropriate in the many Koreas that could erupt on the Rimland. Bases will in the future, as in the past, play a dominant role in Rimland warfare. The resulting primacy of sea power in such warfare is understandable, for as General J. F. C. Fuller has so wisely observed, "the occupation and not the obliteration of the enemy's bases is the strategic aim in war."

No weapon or combination of weapons has ever been devised that can even approach the effectiveness of our balanced fleets of surface, sub-surface, air and landing forces in the conduct of warfare against littoral areas and bases. Amphibious operations would be an indispensable feature of such warfare.

In conclusion, the following seems evident: The 20th Century military thought has been characterized by a persistent eagerness to underestimate and reject amphibious warfare. After each write-off, however, amphibious warfare has demonstrated its effectiveness in modern war. Technological advances have enhanced, not reduced, our national ability to conduct amphibious operations.

Following World Wars I and II, and now again following Korea, the efficacy of maintenance of powerful naval forces and an adequate Marine Corps has been brought into issue. However, resistance to Communist aggression enlarges rather than diminishes the necessity for maintenance of our balanced fleets capable of conducting amphibious operations on the vast Eurasian mainland. Sea power, possessing such attributes, would persevere over Communist land power on the far reaches of Eurasia's periphery. All of which spotlights the strategic fact that amphibious warfare, and with it an amphibiously proficient, combat-ready Marine Corps, will continue to be the indispensable instruments of our national security.

US MC

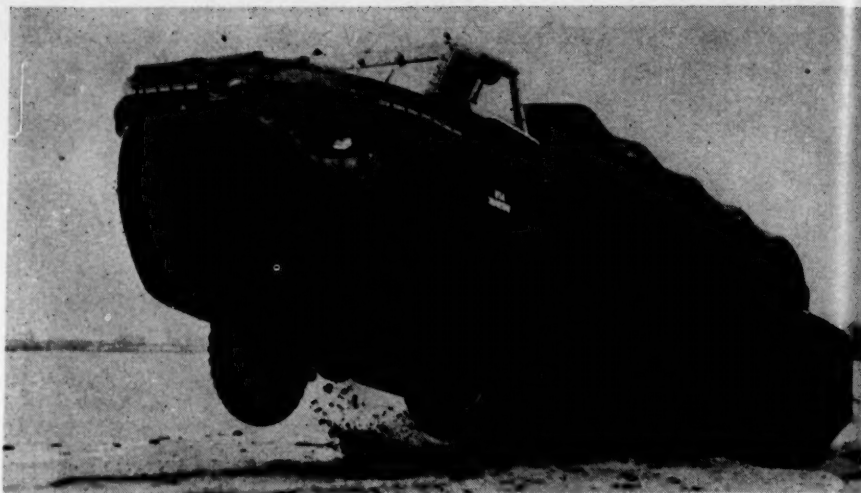
FMF — a fire brigade in the Rimland?



in brief

Shown below are the latest developments in troop carrying vehicles for United States Forces. Pictured (center) is the Army's new Armored Infantry Vehicle M-59 and (bottom) the Marine Corps' newest—the LVTP5.

The most notable feature of the M-59, in addition to its all-around



The new Superduck (above) demonstrates its durability by making a fast, water exit over very rough terrain at Belle Isle Beach, Mich.

The fastest firing automatic gun ever mass produced is being built for the Air Force. Called the M39, it is an electrically-fired, gas-operated, revolver-type feed, 20mm gun. A fantastic rate of fire is achieved through the use of a cylinder which moves ammunition through three stages—feeding, firing and extracting. The gun has no firing pin.

Lockheed Aircraft Corporation has predicted that nuclear-powered bomber planes will be flying within the next ten years. They will pave the way for coast-to-coast passenger planes designed to make a trip across country in less than two hours.

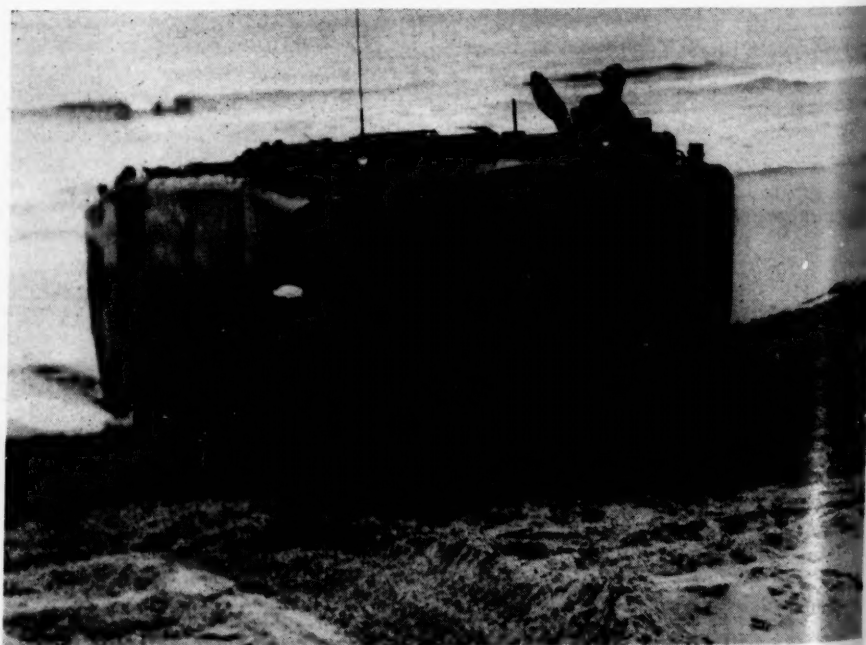


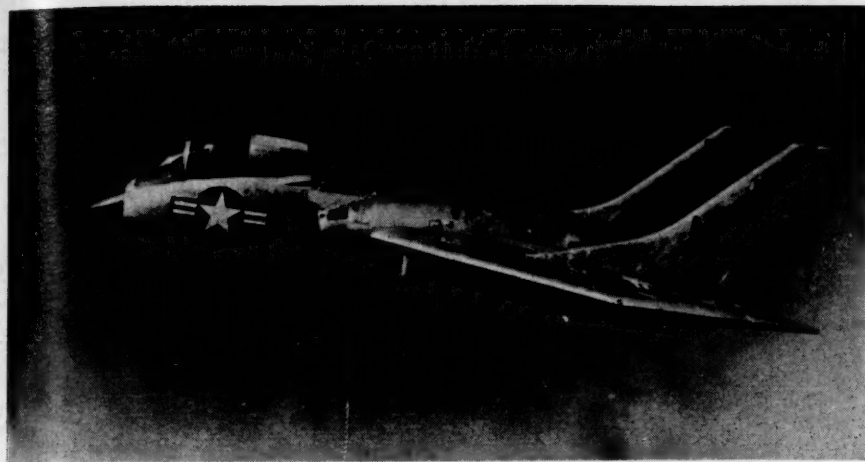
Armor

protective plating of armor, is the fact that it is also amphibious. The vehicle can move either on land or in the water under its own power, without any special preparation or equipment, at a speed just slightly less than that of the LVT.

The LVTP5 carries more personnel than the one squad carried by the M-59. Because it was designed primarily to be water-borne, it lacks the armor, speed and maneuverability (especially in mud) of its versatile, less expensive brother.

Marines who have seen the variety of missions performed by this type vehicle in Korea, will be interested in knowing that the M-59 is now undergoing tests to study its use as a mobile mortar platform, as well as a vehicle which will be able to move personnel in under an atomic blast.





An in-flight view (above) of the Navy's new F7U-3 Cutlass powered by two J-46 jet engines giving it a speed in excess of 650 mph.

The Marine Corps Memorial is 80 per cent completed, according to a report received from Washington, D. C. The actual statue of the flag-raising on Mount Suribachi is almost finished. The remaining steps consist primarily of the construction of an appropriate base, the preparation of the site and the actual erection of the statue. The unveiling of the statue and dedication of the Memorial will take place next Nov. 10, the 179th anniversary of the founding of the Corps.

The Honest John (below) is the new free-flight artillery rocket designed to be used tactically.



The 4th and 5th Marine Division Associations will hold their annual reunions shortly. The 4th will take over Niagara Falls, N. Y. on June 25, 26 and 27. The Spearheaders (5th) will bivouac in Detroit's Statler Hotel June 25 through 27. Brigadier General Thomas A. Wornham, who was commander of the 27th Marines at Iwo Jima, will be the principal speaker.

A flexible kite that kids can maneuver with all the agility of an airplane stunt man may result in better kites for air-sea rescue. Made from Dupont's tough, plastic material "Mylar," the hexagonal kite was unveiled recently at the American Toy Fair. It needs no tail and it can be rolled into a small package. The kite can crash repeatedly and take off again undamaged.

A bill to permit U. S. military personnel to accept foreign decorations for service in Korea has been passed and needs only the President's signature to become official. Over 1,100 awards for American military men have been held up pending the passage of the bill.

Soon to go on trial in Britain is this new sea survival bag (below). Extremely light and made of rubberized fabric it works on the principal of air insulation. Survivors who are suffering from severe exposure are wrapped in the bag which is inflated before use. Body temperatures return to normal in a very short time.



Six Marine Corps squadrons are slated to be equipped with new North American FJ2 Furys. The Fury is a fast, very maneuverable plane designed especially for carrier operation. Powered by a J-47 turbojet engine, the plane is rated in the 650 miles per hour class. Most noticeable difference in the new Fury is the 35-degree sweep-back of its thin, supersonic wing. It mounts four 20-mm cannons, has a range of about a thousand miles and a ceiling of over 45,000 feet. One squadron on the east coast and two on the west coast already have their planes. Others will receive theirs in the near future.

ELIMINATE THE SURPLUS CP

By 1stLt Clifton Rich



AN ARTILLERY REGIMENTAL HEADQUARTERS has been defined as "an intermediate command, designed to harass lower echelons and improve bottlenecks, composed of billets occupied by individual empire builders dealing daily with the big picture." Aside from this somewhat caustic observation, and in keeping with the struggle to eliminate bottlenecks in administration and supply channels, there may exist reasonable doubt that a regimental headquarters in an artillery regiment is necessary at all. The number of additional personnel required to maintain this additional command post, whose duties in no way aid or assist artillery in performing its primary functions, lends weight to the idea. Greater flexibility in the employment of artillery could result with the removal of this superfluous command post.

Artillery organization in a Marine division briefly consists of a regimental headquarters, including a headquarters and service battery; three "light" battalions of 105mm howitzers, a 155mm howitzer battalion of medium artillery, additional units of 4.5 rockets and other artillery, as may be assigned. The three "light"

battalions are normally assigned the missions of direct support, one each to the three infantry regiments. The medium battalion is usually retained under regimental control, in the role of general support and/or reinforcing missions. The practice of attaching or detaching battalions, as needed, in general support of the division front, or to reinforce the fires of one or more of the direct support battalions, or on independent missions such as flak-suppression or counter-battery fires, is a common one. Flexibility then, is an obvious essential in both organization and planning as well as in the execution of good artillery support.

All artillery must be able to shoot, move and communicate. Capabilities of artillery in general include the ability to deliver the proper type of heavy caliber fire on appropriate targets, mass large volumes of fire on vital targets, maneuver fires over a large area rapidly without changing positions, and to be able to fire deep into enemy territory thereby disrupting his communications, supply and reserve forces. Any plan for reorganization must give prime consideration to these capabilities and should not be considered unless it would result

in real improvement.

The regimental headquarters exists primarily for the purpose of coordinating and directing the fires of the artillery battalions under its control. In addition, it provides certain other services relative to administration, supply and the coordination of training. Why not move those sections which are necessary for shooting, to the division command post? Then, streamline supply and administration by having the artillery battalions do business direct with the appropriate section at division headquarters, and thereby eliminate an extra command post with its excess personnel and bottlenecks.

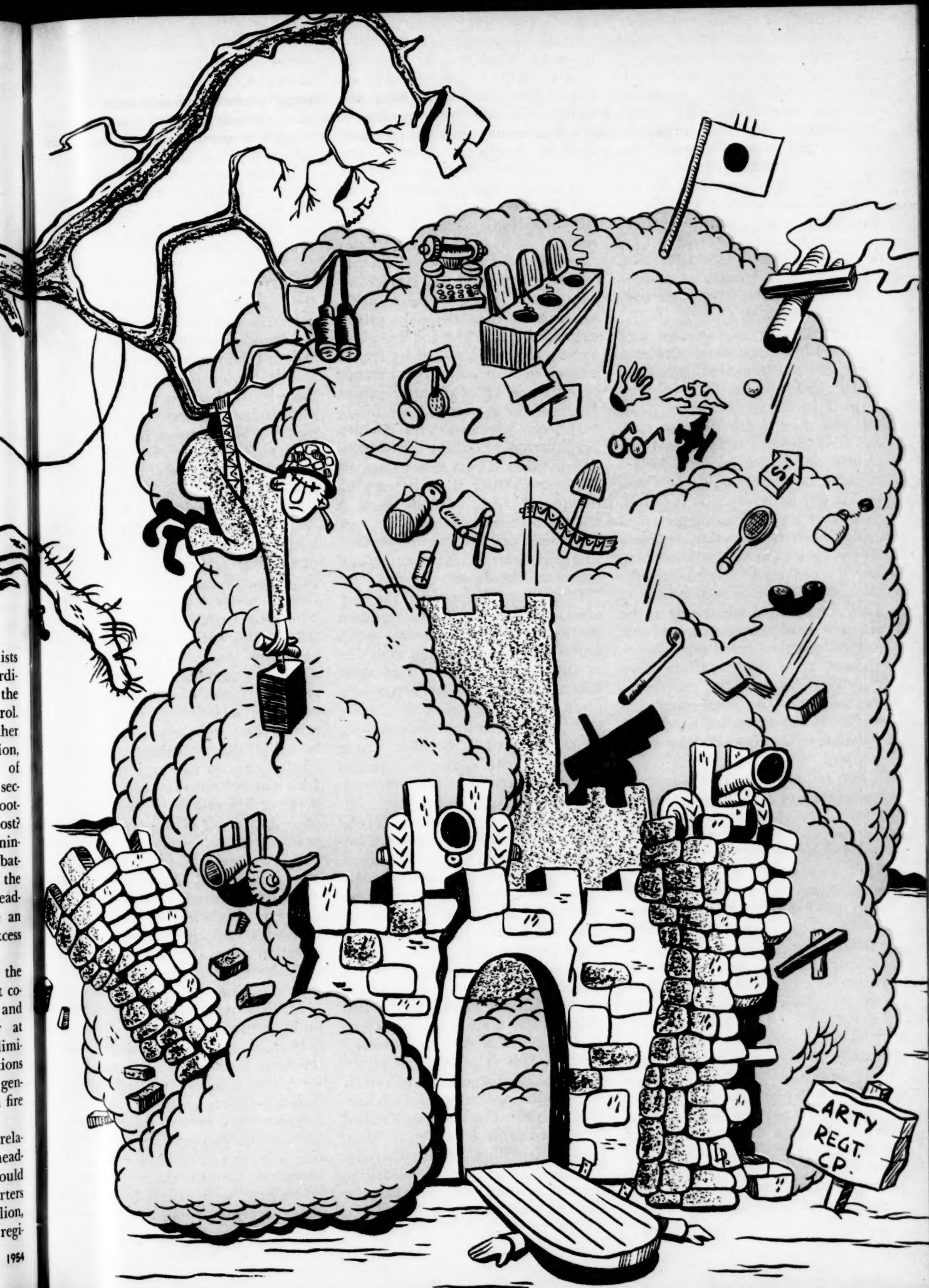
It would seem that bringing the fire direction center, fire support coordination center, S-2, the air and naval gunfire officers together at division headquarters would eliminate a great many communications problems, improve liaison and generally make for a better team in fire support for the infantry.

The proposed organization is relatively simple. The present headquarters and service battery would become an "artillery headquarters battery" in headquarters battalion, Marine division. The present regi-

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mental commander would become the division artillery commander (a change in name only), and should have the rank of brigadier general as does his counterpart in an Army-type organization. This increase in rank is felt justified inasmuch as, quite often, additional artillery is attached thereby increasing the size and complexity of the artillery organization. The executive officer's billet would still be essential, as would also be the S-4, S-3, S-2, FSCC officer (usually located at division headquarters anyway) and the communications officer.

The following sections now used in an artillery regimental headquarters could be eliminated completely under the proposed organization: From H&S Battery—battery headquarters, the chaplain's section, medical and dental sections, and the security and guard section (which is found in most headquarters batteries, but is not authorized in the TO), battery service section, the personnel section, disbursing section, regimental service section (motor transport), and the ordnance maintenance platoon. None of these sections would have any function whatsoever if the artillery headquarters were placed in headquarters battalion, Marine division, since their function is to maintain the artillery regimental command post or other operation which could be handled by the appropriate section from division headquarters.

The following sections would remain intact or have slight modifications to fit the new organization: Fire Support Coordination Center, Operations Platoon (to include the FDC, Survey, and Metro Sections), Intelligence and Counter-Battery, and the Regimental Headquarters Section. Thus, eight officers and 42 enlisted (Marine Corps) and five officers and seven enlisted (Navy personnel) can be saved without affecting the artillery functions of this headquarters.

As to the question of communications in this proposed organization, it is the opinion of the author that considerable labor, time and a few communications personnel can be saved. Again, a detailed analysis of the wire systems and radio nets is prohibitive; however, it is obvious that certain telephone lines and radio nets are no longer needed between

division headquarters and artillery regimental headquarters. A long discussion with an experienced and qualified communications officer concerning this new type organization and the communications problems involved resulted in a firm opinion that communications would be better; wire, radios, personnel saved and the overall communications system simplified. This is believed enough to justify reorganization from a communications standpoint.

The task of endorsing correspondence of all types, routing orders, maintaining files, assigning personnel and the hundred and one other items which are handled by the S-1 section in the artillery regimental headquarters are of a routine nature. Much of the correspondence to the battalions originates with division headquarters, or outside the division, and requires only a forwarding endorsement. Much of the paper work originating with the battalions is addressed to offices outside the regiment and does not require any decision or comment as it passes through regimental headquarters.

In the legal department, the regimental commander has no status in the legal chain of command at all unless he is the convening authority of the courts-martial. All of these functions in the administrative field could be completely eliminated along with any administrative problems which required a decision, being handled by the appropriate person in the G-1 section at division headquarters.

In the field of supply and logistical support, the regimental headquarters serves merely as a monitor. Requisitions from battalion are "processed" at regiment and forwarded to division where they are acted on by the proper authority. Checking allowances and consolidating requisitions, or any other job that the present supply officer does at regimental level would be no added task for the division supply office. The accountable officer in an artillery regiment at present has no accounts of the battalions, but merely handles the accounts for H&S battery. This function could be handled by the accountable officer of headquarters battalion, Marine division. The S-4 billet would be needed in the artillery headquarters battery at the division headquarters.

At present we have a separate command post for the artillery regiment which requires the "house-keeping" personnel normally found in any command post. To do away with this command post without hampering the functioning of the operating battalions, and thereby save the personnel involved, certainly would seem desirable and in keeping with the principles of economy and good organization.

THE QUESTION of "What about tradition and the regimental colors?" will arise and undoubtedly should be considered. However, to maintain a headquarters the size of an artillery regimental headquarters for the sake of tradition and to have a place to keep the regimental colors is hardly a valid reason for so doing. The regimental colors could very well be kept at division headquarters to be used on occasion. To lend some individualism to each of the four "separate" artillery battalions, they could be permitted to design a crest (with the approval of the Commandant of the Marine Corps), to be used as appropriate. The tank battalions, engineer battalions and various other separate battalions now found in Marine divisions and Force Troops do not seem to have too much trouble maintaining unit pride. Knowing artillerymen and the pride they take in being able to deliver the right kind of fire, on time and on target, I do not believe they will ever experience low morale or lack of unit pride as a result of this type organization.

It is apparent that this change in organization will have little or no effect on the primary missions of artillery or capabilities of the artillery battalions and the regimental fire direction center. On the contrary, it is believed that greater flexibility can be achieved in the employment of artillery by the elimination of this bulky headquarters.

In keeping with sound military thinking, in order to achieve better fire support, better communications, improve supply and administrative functions, and achieve the most economical use of personnel and materiel, it is time to revise our artillery organization. Eliminate artillery regimental headquarters for a more effective organization. US MC

KOREA AWARDS



Medal of Honor

Sgt Daniel P. Matthews, Cpl Lee H. Phillips.

Navy Cross

Maj John F. Bolt, TSgt Walter C. Borawski, Sgt. Fred D. Chadwick, Pfc John B. Elwell, Pfc George F. Fitzpatrick, Sgt Howard C. Hensley, Jr., Sgt Frank E. Lovett, Jr., Pfc Ramon Nunez-Juarez, Sgt Arlis W. Ramsay, Sgt Lloyd B. Smalley, 1stLt George W. Yates.

Distinguished Service Medal (Air Force)

MajGen Vernon E. Megee.

Silver Star

Sgt Wallace E. Blanton, Pfc Richard F. Breznican, Cpl George R. Broadhead, Cpl Horace J. Drake, Pfc Donald F. Dolsak, Cpl Robert A. Paul, 1stLt John S. Gray, Pfc Richard A. Haagensen, Sgt Joseph S. Orozco, 2dLt Louis G. Proctor, Capt Louis J. Sartor.

Legion of Merit

LtCol Francis W. Augustine, LtCol Hoyt U. Brookhart, Jr., LtCol Charles W. McCoy, Maj Lawrence F. Snoddy, Jr., BrigGen Merrill B. Twining (2d), Col Frank H. Wirsig.

Distinguished Flying Cross

Capt William A. Dougherty, Capt David J. Hart, Capt Harold H. Hopkins (2d), 1stLt Lavern W. Larson, Maj George H. Linnemeier, Capt Henry Moberg, Jr., LtCol Clarence H. Moore (2d), Capt Paul G. Murphy, Capt Robert I. Nordell, TSgt Charles W. Offutt, Maj Harvey M. Patton (5th), Capt Francis H. Rogers, Maj Thomas M. Sellers, Capt James G. Sutton, Maj Johnnie C. Vance, Jr., (4th), Capt John C. Wolf (3rd).

Navy and Marine Corps Medal

Pfc Ronald L. Vertz, Pfc Gustave R. Voss, Cpl Jack R. Wall.

Bronze Star

SSgt Roberto R. Acosta, LtCol Earl E. Anderson, SSgt Ralph H. Ballard, Jr., Col William H. Barba (2d), Maj Francis K. Bernardini, Maj Bernard M. Boress, Cpl William L. Bowers, Sgt Lester S. Brock, Cpl Roy M. Brooks, LtCol Harold F. Brown, Pfc Thomas J. T. Brown, Cpl James R. Browne, Maj Warren A. Butcher, Cpl Thomas E. Calhoun, SSgt Donald E. Campbell, 1stLt Robert P. Chaney, LtCol Robert A. Churley, Capt Gregory J. Cizek, 1stLt Gorton C. Cook, Pfc Donald R. Comtois, Pfc Nicholas R. Congero, LtCol Stoddard G. Cortelyou, Sgt Edward F. Crawford, TSgt Francis A. Creager, Capt Edward W. Critchett, Capt Robert J. Daeschler, Pfc

Italics denote posthumous award.

Joseph Dalgo, SSgt Roy B. Daves, Pfc Evert R. Dick, Cpl Frank S. Di Filippo, Pfc James A. Dixon, Major Frederick C. Dodson, Capt William F. Doehler, Capt John D. Driggers, Jr., Sgt William J. Duggan, Cpl Robert H. Easterling, Sgt Saverio C. Eckert, Capt Robert M. Erbland, Capt Ralph F. Estey, Cpl William H. Falvey, Jr., LtCol Morris E. Fiater, Pfc Charles A. Fletcher, 1stLt Winston F. Fontaine, Sgt Vernon L. Fosberg, SSgt John D. Franco, Capt Ray Funderburk, 1stLt Robert F. Glancy, Capt Jack Glenn, Capt Samuel G. Goich, Cpl W. E. Gove, LtCol Walter E. Gregory, Sgt James M. Grimes, Capt William R. Grubaugh, Pfc Howard J. Hahn, 2dLt William P. Haight, Pfc Harvey T. Harriott, Cpl Don R. Harman, Pfc Owens B. Havard, SSgt French L. Haynes, Jr., Cpl Walter J. Heidecker, SSgt Eugene R. Hejmanowski, Major Vernon L. Hendley, LtCol John T. Hill, Major Robert C. Hilliard, Sgt Francis J. Hipple, Maj John A. Hood, Maj Thomas D. Hopkins, 1stLt Jack F. Ingalls, 2dLt Clarence E. Jenkins, Sgt William A. F. Jenkins, Pfc Larry G. Jessup, SSgt Alfred Joyce, Cpl Francis J. Kane, Capt Timothy J. Kearns, 1stLt Charles F. Keister, 2dLt John F. Kelleher, 2dLt Charles W. Knapp, Pfc Richard L. Kocsis, Pfc Ronald E. Kounanis, Pfc Francis S. La Corte, 1stLt Frederick C. Leder, Maj David H. Lewis, 2dLt George F. Lewis, Jr., Pfc Joseph A. Lilla, Sgt John R. Long, Cpl Raymond Lopez.

Maj. David L. Moberly, TSgt Richard G. Moran, LtCol Clarence H. Moore, Sgt Robert W. Neumann, Pfc Carl F. Nix, Cpl Richard L. Norton, LtCol Robert J. Oddy, Capt Charles H. Opfar, Jr., 1stLt Herbert R. Oxnam, Jr., Capt Thomas A. Palmer, Sgt William J. Paris, Maj Marvin D. Perski, Pfc William J. Plumley, Jr., LtCol Daniel S. Pregnall, Cpl David P. Ream, 1stLt Heman J. Redfield, Cpl Luis Rivera-Cruz, 2dLt Carlo Romano, Maj John McN. Rosebush, Cpl Kenneth B. Scaff, SSgt Raymond Shively, LtCol William J. Sims, 2dLt Jean V. Smith, Capt Joseph Smith, Cpl Russell E. Smith, Pfc Leland N. Snell, Capt Harold E. Stine, Maj Thurston B. Stidham, Maj Allen F. Stockdale, Pfc Bruce Sutherland, Capt William T. Sweetman, Capt Robert J. Thomas, SSgt Leo E. Tierny, Jr., 2dLt Leland W. Tucker, 1stLt David M. Twomey, (2d) 2dLt James Can Den Elzen, 2dLt Lawrence A. Van Groder, 1stLt Richard P. Weinberg, Cpl Wendie A. Wilcox, LtCol Frank R. Wilkinson, Jr., Cpl Forrest L. Wiggins, Pfc Jessie Wooten.

SSgt Larry L. Clark, Pfc Russell R. Clark, Jr., 1stLt Kenneth J. Clifford, Capt William A. Davis, Col Wendell H. Duplantis, LtCol Wilbur A. Free, Maj James A. Harper, Capt James M. Landrigan, Maj Edward H. Mackel, Sgt Jay E. Major, Pfc Neil J. Manthey, Pfc Jerome R. Marcellus, Sgt Robert E. Marshall, Sgt James M. McCarthy, TSgt Paul V. McHugh, Cpl Stuart S. McKee, Pfc Marshall E. McLean, Capt Ken-

neth McLennan, LtCol Bernard McShane, Capt William L. McCulloch, Pfc Cecil G. Mellinger, Pfc Jose H. Mercado, Col Albert F. Metz, LtCol Ross S. Mickey, Capt John Misiewicz, LtCol Joseph C. Missar, 2dLt Paul A. Monahan, Cpl Jack C. Mueller, Maj John Nesko, Capt Richard F. Noble, Sgt Lavern R. Pollard, Capt Ben C. Porter, 2dLt Robert A. Rausch, SSgt James H. Reid, Pfc Marvin H. Richard, Maj John J. Richards, Sgt Albert E. Schauble, Col Alan Shapley, Pfc Roy T. Sheffield, LtCol Lynn H. Stewart, 1stLt David S. Tolle.

Letter of Commendation

MSgt Lester R. Bamford, Capt John M. Batchelder, MSgt John J. Beatty, 1stLt Norman J. Berg, 1stLt James H. Bolton, SSgt Clarence Bytof, 2dLt William L. Chapman, 1stLt John Colia, Capt Joseph Di-Frank, Jr., Capt Louis E. Dunning, Capt Paul M. Edwards, 1stLt Joseph J. Gaugler, Sgt Richard E. Geraghty, Capt Leonard M. Gillespie, CWO Joseph R. Grosby, Jr., Capt Edward H. Hall, TSgt Norman C. Hamill, Capt John A. Hedin, 1stLt Frederick L. Holl, SSgt Richard D. Hunter, Capt Paul Kessler, Capt Charles F. Langley, SSgt Cash G. Lewis, Capt Howard Lyon, WO James T. McDonell, 1stLt Nathan Mervish, TSgt David I. Michalovich, 1stLt Carl W. Moog, SSgt Allen L. Moran, 1stLt George E. Morrison, 1stLt Frank F. Mullen, Pfc John B. Murray, Maj Harry E. Nevill, 1stLt Lawrence A. Novak.

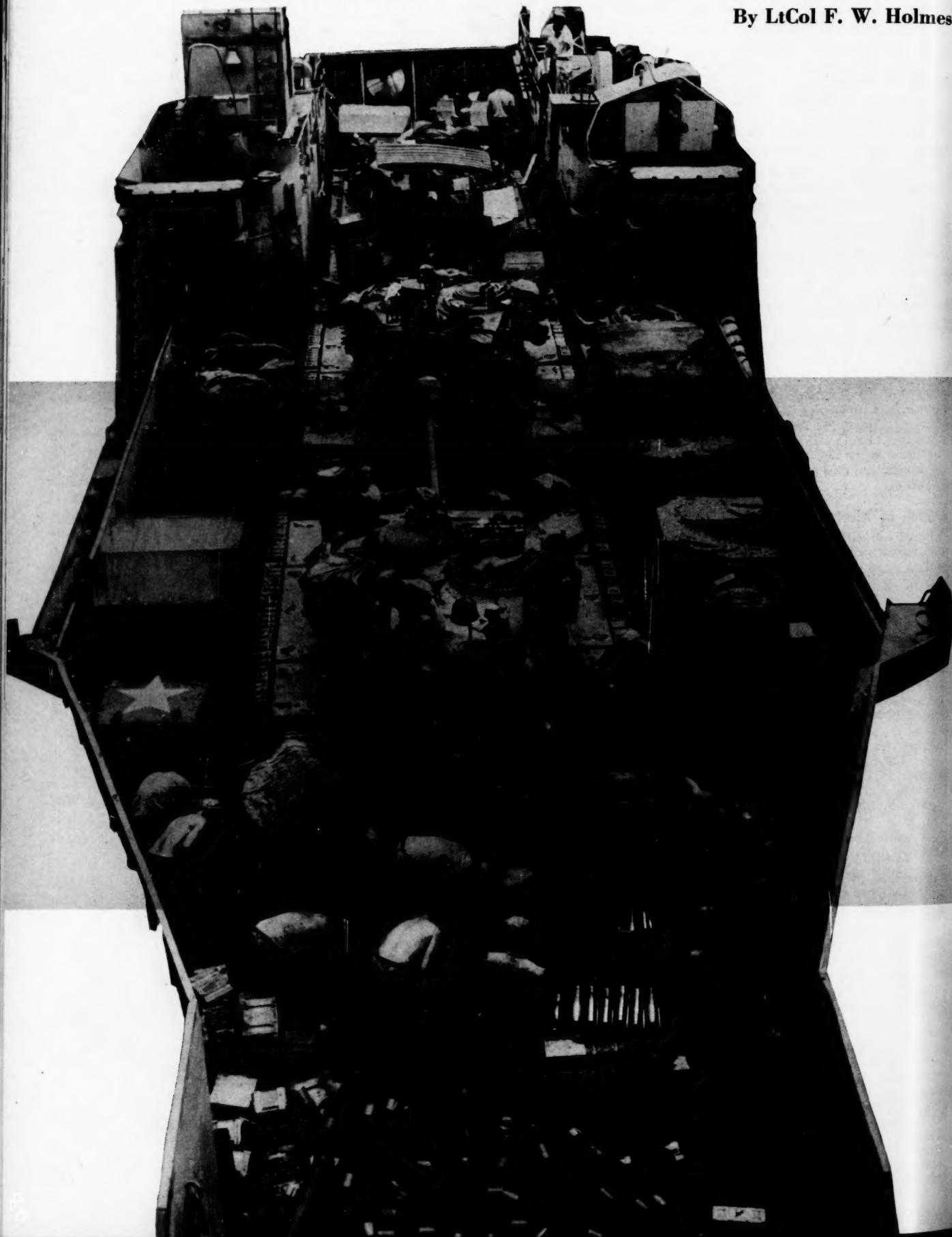
SSgt Charles H. Owens, 1stLt Carl D. Peterson, Maj Frank M. Richard, MSgt John R. Rosner, 2dLt Earl L. Rottsohl, 1stLt Jerome Sanders, 1stLt William A. Scott, Jr., SSgt Joseph Shkymba, 1stLt Herbert O. Smith, Capt Frederick R. Sternkopf, Maj Richard L. Sullivan, 1stLt Vernon L. Sylvester, TSgt Linwood W. White, 1stLt Charles S. Whiting, 2dLt Lawrence A. Wolf.



IT'S IN THE RECORDS

... better logistics through applied statistics

By LtCol F. W. Holmes





“YOU CAN’T TAKE IT WITH YOU!” is a well-worn phrase we are all used to hearing. Although most often used in reference to money, the Marine (whose money problems rarely include what to do with the surplus) finds that this phrase best fits the problem of the amphibious planner who knows he needs something, but can’t take it along. No matter what the operation, the objective, or the mission there never seem to be ships enough to do the job.

Even if all the ships of the fleet were to be retailored to meet the precise present needs of the amphibious commander, it is reasonable to assume that changes in Tables of Organization and Tables of Equipment, as well as new tactical concepts, would soon occur, transforming the

amphibious fleet into something far short of the original ideal.

The problem of what to take, what to phase back and what to leave behind entirely will always be present in the field of amphibious warfare. Our amphibious planner will, through time immemorial, be arranging his equipment and supplies into little lists and priorities similar to the following:

1. Things I absolutely cannot do without.
2. Things higher headquarters says I must take.
3. Things that can’t wait but must.
4. Things that can wait and will.

When the availability of shipping and the capacities of that shipping so strongly determine the means with

which the commander will accomplish his mission, we find that logistic limitations on the means exert direct influence on the method of accomplishing the mission. Nothing typifies modern warfare more than the increasing dependence of the commander on his logistics. Nowhere in modern warfare is this dependence so great.

The good amphibious commander is, of necessity, logistically minded. This does not mean, however, that there is, or should be, anything intuitive about the solution to the logistic problem. Every commander has certain guides:

First, he has his mission which imposes certain inferred but definite logistic minimums.

Next, he has directives from higher



authority as to what he must have for certain purposes and contingencies.

He has data on ship characteristics and equipment dimensions.

He has historical data on the weight and cube of certain classes of supplies for similar or analogous operations.

He has a host of allowance publications which give him his basic authorization and replenishment rates.

In easing the lot of the commander in his logistic planning there is little that can be done about the first three guides. They are the irreducible facts of mission, guidance by higher echelons and the nature of the commander's equipment and transport. The last two guides, however, deserve detailed analysis and consideration. Two questions concerning these guides are posed here which will bear detailed scrutiny:

First: Is the historical study of past operations a proper guide to the logistic needs of future operations?

Second: Do current allowance publications have sufficient scientific basis, either historical or otherwise, to justify their employment in logistic planning?

At first thought, the historical approach would seem to be right and proper. Particularly, it is a good approach if the admonitory caution contained in the introduction to the Staff Officers' Field Manuals of all services is followed: "Data contained herein are based on experience principally from World War II, and can be applied to the future only with judgment and discrimination."

Since past history can only be used as a guide, the commander is obliged to bring his intuition into play to determine the degree of applicability of past operations to the operation under consideration. Intuition will never be wholly ruled out and "art of war" will never truly become "military science."

Again, when we consider the various staff officers' field manuals with their distilled quintessence of World War II operations, we must ask: "Are the data contained in these manuals the actual facts as they were during World War II?" This, I believe we must assume, although the standards of recording and evaluat-

ing data throughout that period were certainly not always uniform.

An even more pertinent question in assessing the value of staff logistic manuals is: Were the operations on which these data are founded good operations, efficiently conducted and logistically sound? It would certainly be indifferent judgment to base future operations on the less successful operations of the past, but such is the tyranny of statistics that the good, the bad and the indifferent are, in these manuals, added together and then averaged out. The resulting quotient has all the faults of the Kinsey report: statistically sound, but providing scant clue to right and wrong.

It is not intended here to throw logistic manuals under such a cloud of doubt as to place greater trust in the intuitive approach to logistic problems. What is intended, however, is to show that the study of history, valuable though it may be, is only one tool which must be used. It is hoped that future logistic studies cover not only the actual statistics which were collected concerning specific operations, but that these statistics be measured against an over-all operational analysis so that "should have done" will have greater weight than "did" in future planning.

Actually many of the guides contained in staff logistic manuals, even though resting solely on the experience of unevaluated past operations, not only sound like facts but *are* sound facts. In the field of Class I,* for instance, the tonnage of rations required may be quite closely determined both from experience and from allowances. Little room exists for more efficient collection of data in this field owing to the inexorable and predictable demand for one ration per man per day. Future inquiry in the Class I field to determine where economy may lie should chiefly center around the amount that must accompany troops ashore, and how much should follow in later echelons.

In the field of fuels and lubricants

*For the uninitiated or those who have forgotten, a quick generalized refresher: Class I, rations and water; Class II, T/A issue items such as trucks, tents and clothing; Class III, fuel and lubes; Class IV, special non-T/A items such as fortification material and Quonset huts; Class V, ammo.

(Class III) much the same considerations exist. Consumption rates can be determined historically, and they may be checked by actual computation, based on vehicle population and on known consumption rates. There is little room here for future inquiry except for continual study of consumption rates.

In the logistic study of future Class V requirements a very special consideration exists. Usage rates of the past may mean very little in future operations. Planning for the use of artillery ammunition for



Space available determines

Korea was based primarily on World War II usage rates. This historical approach failed to anticipate fully all requirements for two reasons. First, doctrinal change in the employment of artillery visualized employment against potential rather than positively determined targets, and thus greatly increased usage. Second, since there were fewer weapons of given calibers per mile of front, the number of rounds fired per weapon increased on a comparatively proportional basis.

Future determination of ammunition requirements by planners at all levels will always be more difficult than the computation of needs for rations and fuel. The planner must weigh the experience of past operations and the computed allowances against his informed estimate of the special demands to be imposed by specific future operations.

It is when we consider the hodgepodge miscellany of items falling into the categories of Class II and IV, that we discover where the logistic planner may achieve his greatest

economies. Although Class II and IV supplies, which accompany or replenish amphibious forces, do not bulk to so great a tonnage as fuel, rations or ammunition, they do represent a substantial proportion of total tonnage and a tremendous cost in dollars. Likewise the sorting, segregation and stowing at the beach of Classes II and IV, as well as the demands of forward displacement, require a greater number of man-hours per ton than do less diverse classes of supply.

What guides does the logistic

perience or intuition of the planner and not upon historical data scientifically collected. For, with this most complex of all classes of supply, no real historical data exist!

In fairness, it would be well to qualify the previous statement to state that usage experience of some major items is scrutinized. A degree of scientific control is attained for signal items on which a system of failure reports exists, although this system is as often honored in the breach as in the observance. For the majority of Class II and IV, nonetheless, no scientific usage data exists.

What about the allowances themselves? And the replenishment rates in the manuals? Are they not based on usage data, collected on the basis of actual experience and scientifically computed? Unfortunately, the answer is that they are not. Replenishment rates and allowances are normally established initially on the basis of a well informed guess. The guess may be made by the manufacturer who feels that certain components of his equipment will require replacement in accordance with an estimated probable frequency. The guess may be made by an officer of the G-4 Section of the General Staff; reinforced, perhaps, by the informed guess of a special staff officer of the Supply Department, but, however the surmise is made, it remains only that.

To take the guesswork out of the allowance publications, a flow of statistical usage data from units engaged in actual operations is necessary. Currently there is no channel established and functioning for the flow of data of this type. Gross discrepancies must be detected and made the subject of correspondence through command channels. The amount of this flow is very small since no organized program exists for the initial collection of data on which to base recommendations.

Statistical study of consumption of Class II and IV supplies would achieve several essential objectives:

1. It would provide for continual refinement of allowances and replenishment rates.

2. It would simplify the job of the logistical planner by pin-pointing actual requirements rather than supposed needs.

3. It would reduce tonnage demands on assault and follow-up ship-

ping and alleviate beach congestion.

4. It would achieve economy in a field characterized by high unit costs and critically short supply.

Statistical study of the type visualized here cannot be conducted retroactively. The experience of World War II is essentially lost so far as analysis of this type is concerned. Despite the diverse supply channels enjoyed by Marine units in Korea, some data of this type might still be salvaged. But, to be performed correctly, statistical study should be conducted continuously during actual operations.

Is this a "supply" job or a "G-4" job? This is a controversy which has no real bearing on the problem. Regardless of who collects and who evaluates, it should be a matter of command interest that such study be performed. To be of value, data must be collected at the lowest echelon, evaluated and transmitted, with or without command recommendation, to the headquarters which creates and maintains allowance publications.

As the logistician's job becomes greater, he requires better and better tools with which to work. The Marine Corps, by its specialized mission, imposes burdens on the logistician which find their parallel only in airborne operations. Amphibious operations in the atomic age require critical control over every ton of supplies, since the delicately balanced requirements of mass versus dispersion and the characteristics and limitations of the helicopters, on which future operations will depend, militate against World War II supply prodigality.

The amphibious logistician needs a new tool appropriate to the scientific developments of today. This tool should be sensitive to changing needs and experience. It should, so far as possible, replace military art with military science. The tool here proposed for adoption is statistics. The logistician needs guidance data based on experience and not on guesswork. By use of a statistical tool which collects usage experience, not only for classes of supply, but also for items within those classes, and then refines that experience and evaluates it, we will achieve greater economy and efficiency. In effect, we can have better logistics through applied statistics.

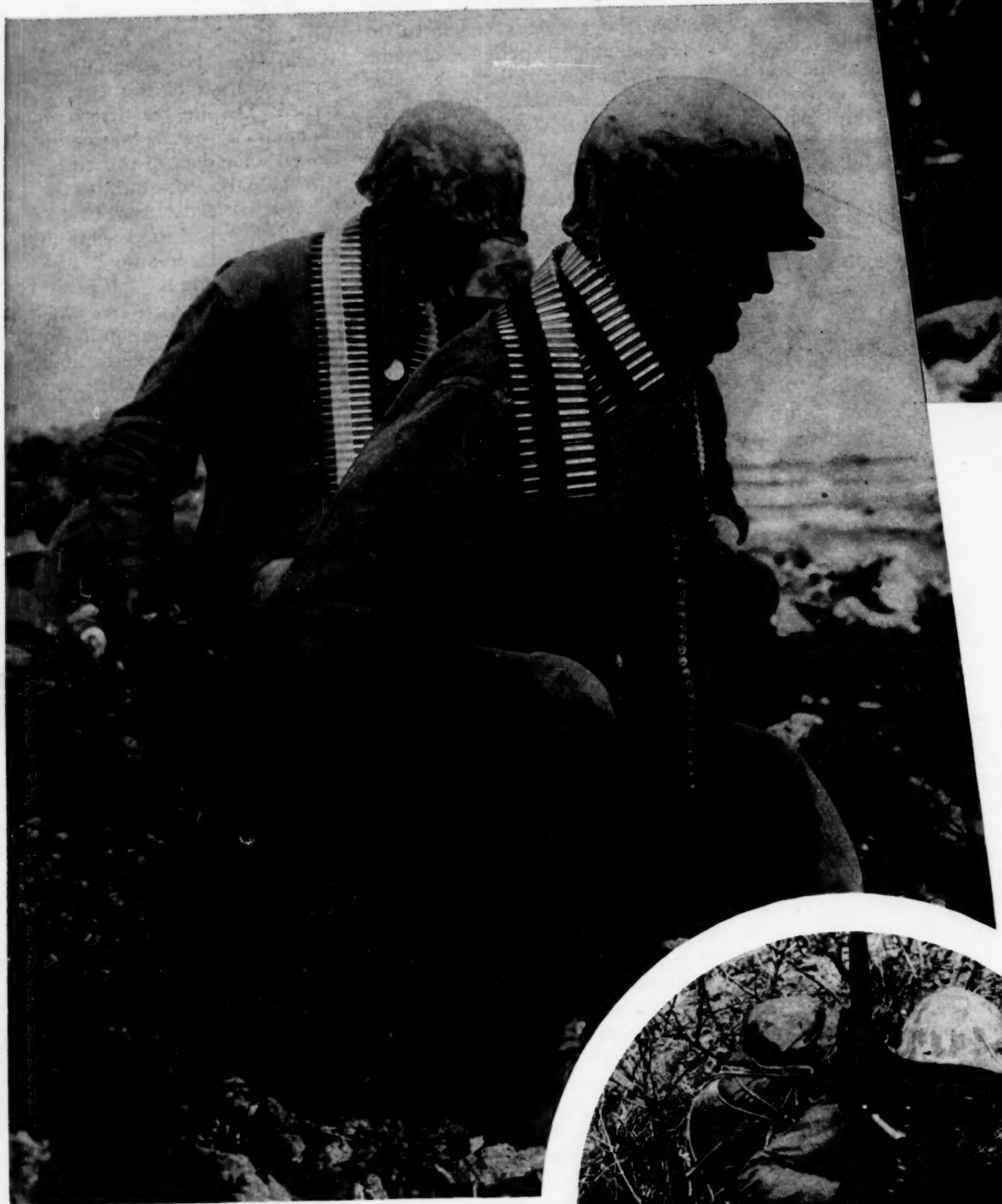
US MC



what to take, and what to leave

planner have in determining how much Class II and IV to take and how much to leave behind? His logistics manuals which were so helpful for other classes of supplies are of little use here. To be sure, they give him historical information as to how many tons of Class II and IV are used per man per month under certain conditions. But these manuals do not give the planner an item-by-item picture such as he needs and gets for other classes of supply. Because of the thousands and thousands of items involved, the logistician contents himself with broad historical tonnage data which provide him with little control over the supplies in this category.

For an item-wise control, however, the planner does have access to allowance publications. The replenishment rates appearing in tables of allowances are generally accepted at face value, and the items authorized in those tables are taken along whether they are needed or not. When exception is taken to these tables, it is based on the personal ex-



By TSgt Michael Soley



Each member of the crew has a distinct job. The way he performs it determines

the effectiveness of

the LMG SQUAD

THESE DAYS, AS IN THE PAST, whenever the employment of machine-guns is considered, only two major points are thoroughly discussed. Talk centers around fields of fire, the responsibility of laying them out and the merits and capabilities of the various machine-gun crews.

Fields of fire are certainly important to successful employment of machine-guns and it is well to know the capabilities of the various crews. But in discussing the crews and methods of making them more efficient with their weapon, emphasis is placed on the gunner, and in some cases the assistant gunner. The balance of the crew are forgotten souls—"just keep out of the way and bring up plenty of ammunition," seems to be the accepted attitude.

In the make-up of a machine-gun crew, it is understood that we must have the gun, the gunner and the assistant gunner. The rest of the crew can be made up of any number of men whose only responsibility is to get the ammunition to the weap-

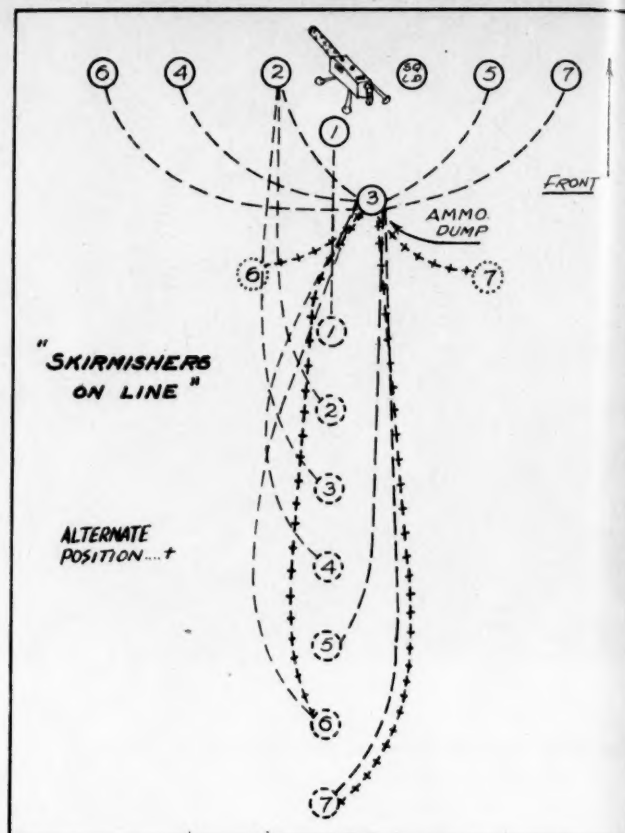
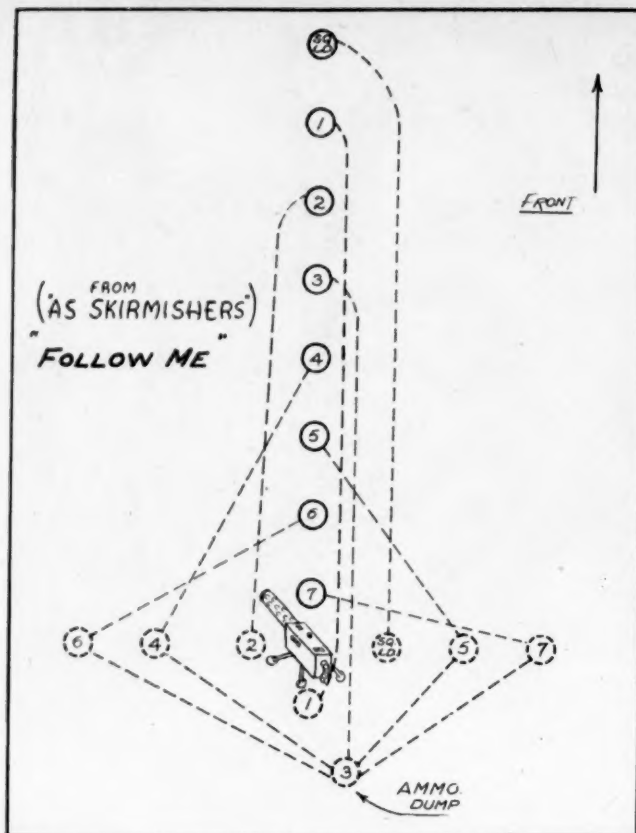
on and do as they are told by the gunner or the squad leader.

I have been working with machine-guns for a number of years and have given many hours of thought to their employment. I

worked out several theories and finally, in Korea, the opportunity arose to test them.

Out of the tests there evolved these formations for the deployment of machine-guns on the offensive.





In these formations, every member of the gun crew has a distinct job. He has a responsibility and is an active part of the fighting team—he's right up there pitching all the time and is on the line, watching and supporting every move made.

You will note an innovation in these formations—the establishment of an ammunition dump for the machine-gun. Previously, each ammunition carrier kept his quota of ammunition on or near his person—a practice that limited his movements when the gun was in action. Therefore, it was found that if the ammunition was held at one central point during the time the gun was in action, one man operating from the position of the dump could keep the gun supplied with ammunition.

On the move, each man carries his quota of ammunition as before. But when the gun is set up, each carrier drops his ammunition at a central point, and then goes to his prescribed position in the formation. In taking the gun out of action and moving the position, each man files by the ammunition dump, picks up his load and falls into his prescribed place in the march order.

Following are descriptions, with sketches, for the training and de-

velopment of a machine-gun squad on the offensive. For the purpose of this text, and in training phases, it is considered that a five-pace interval between men will be sufficient. For actual use in combat, the old factors, situation and terrain, will dictate the interval to be used.

Duties and movements for the No. 1 man (gunner) and the No. 2 man (assistant gunner) are the same as prescribed in paragraphs 83-84, Field Manual 23-55 except that the No. 2 man will command, "Ammunition up," when ammunition is needed at the gun. The No. 3 man (spare parts and ammunition carrier) is responsible for the operation of the ammunition dump. Numbers 4, 5, 6 and 7 are all ammunition carriers. Here are the five formations:

FOLLOW ME: a formation similar to the rifle "squad column." It is used to move the machine-gun. The squad leader commands, "Follow Me!" and leads out. The rest of the squad follow in numerical order.

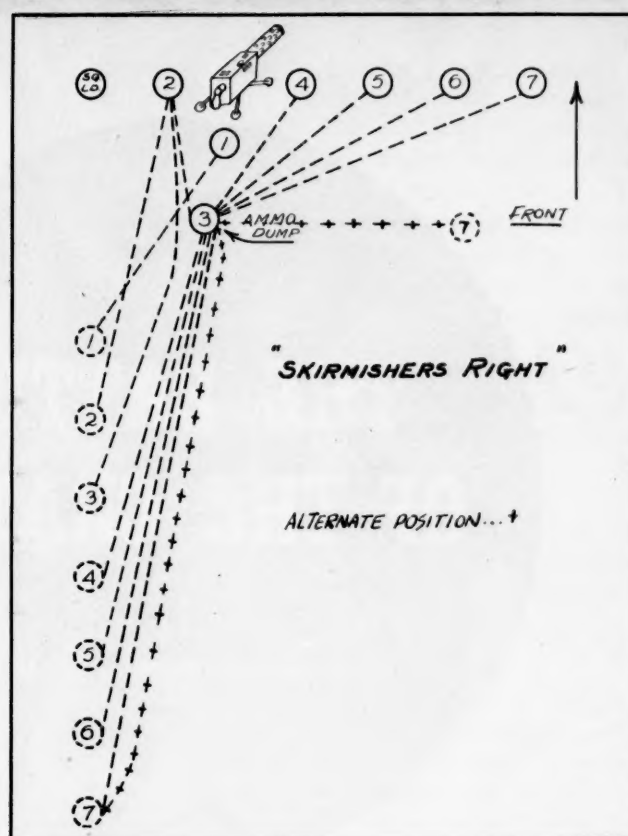
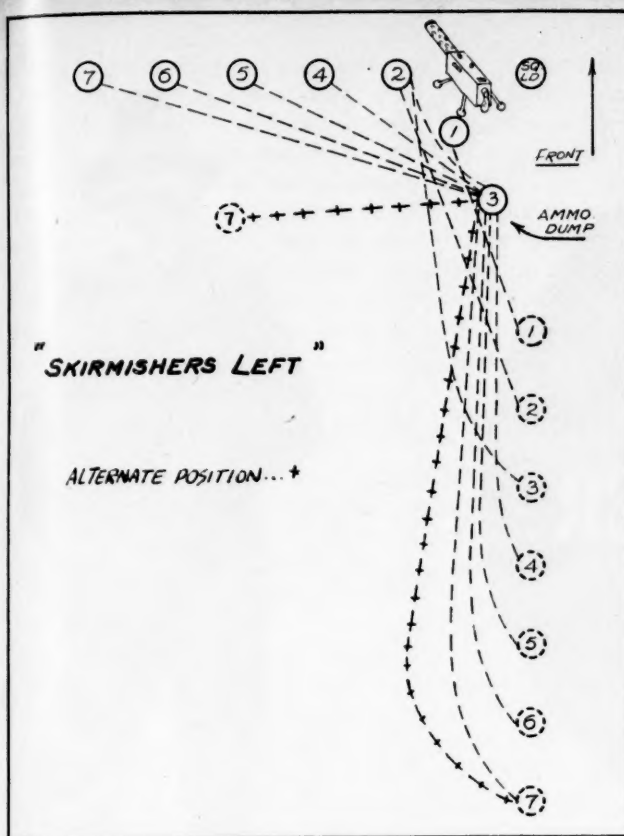
SKIRMISHERS ON LINE: By word of mouth or by using hand-and-arm signals (same as infantry signals except that squad leader faces his squad) the leader commands, "Skirmishers on line!" The No. 1 and No. 2 men put the machine-gun in

action. No. 3 places the ammunition box in line with the feedway and places the spare parts chest next to the ammo box. Then he returns to the rear of the gun to establish the spot for the ammunition dump. He also acts as rear guard security at this position. Numbers 4, 5, 6 and 7 advance, drop their ammunition at the dump and take up their position as shown in the sketch. As each man arrives at his position, he takes up the security and observation from that position.

SKIRMISHERS LEFT: this formation might be used in cases where the gun is set up next to some natural or man-made object which protects the right flank—a sheer cliff, a high wall, the bank of a river, etc. Movements are the same as those performed in skirmishers on line. Positions are taken up as shown on the sketch.

SKIRMISHERS RIGHT: Same formation as previous movement except protection is to right of gun.

In the three formations just described (skirmishers on line, skirmishers right and left), if the ammunition in the dump must be replenished, the No. 3 man will order the No. 5 and/or the No. 6 to the rear to pick up ammunition. On



their return they may be ordered to alternate positions as shown in sketches above. These are alternate positions but they may be used initially if the situation warrants.

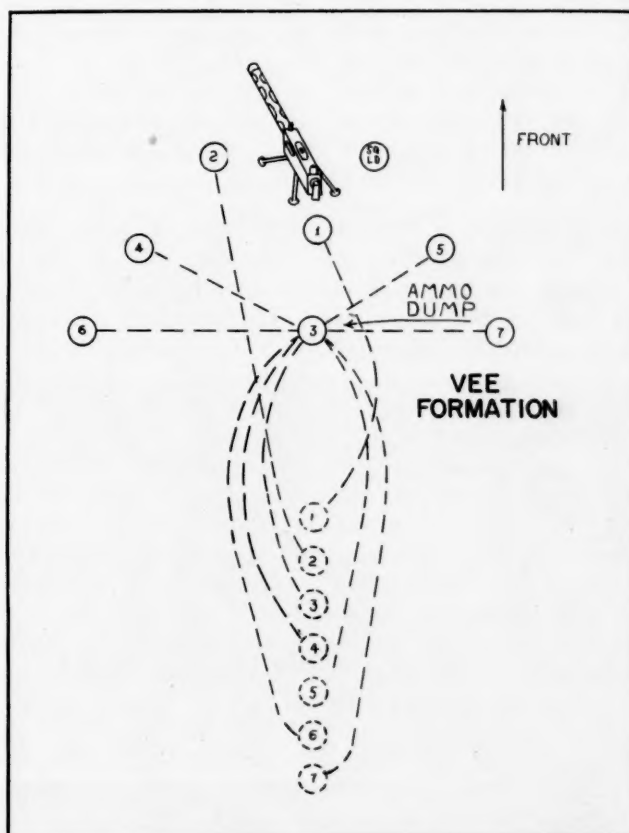
VEE FORMATION: Command may be given orally, or by arm signal. (Facing squad, leader extends both arms, palms down, each arm forming a 45-degree angle with his body so as to form a "V.") All men perform same functions they did in other formations and take up their positions as shown in sketch. This formation can be used effectively when fighting either on finger ridges or in the jungle.

An added suggestion. It was found that, because of the terrain and poor supply routes, ammunition sometimes had to be man-carried great distances, and there weren't any ammunition carrying bags available. By adapting the 60mm mortar bags, a very satisfactory substitute was made. Utilizing bags of this type left the ammunition carriers' arms free, saved their strength and permitted them to operate their M-1s at any time.

It was found that by using formations of this type, utmost security that could be had was achieved with the

number of men involved. They gave the squad a greater mobility, and most important—by moving Nos. 4, 5, 6 and 7 up to where they can

see what's going on in the firefight—these formations produce the end to which all means in combat are directed—greater firepower. US MC



THE BATTLE OF THE CRATER

By Corporal William G. Bruce



Bettmann

ON A JUNE EVENING IN 1864, A Federal officer stood on a little rise of ground behind the Union lines gazing attentively at the frowning Confederate earthworks opposite him.

He had been through the fighting in The Wilderness and at Spotsylvania, at North Anna and Cold Harbor. He had crossed the James with the army and had participated in the attack on Petersburg. Now the Army of the Potomac was in the trenches before Petersburg, faced once again by the Army of Northern Virginia.

The officer was LtCol Henry Pleasants, commander of the 48th

Regiment, Pennsylvania Veteran Volunteers and, at the time, acting commander of his brigade.

His attention was fixed primarily on an outcropping of heaped-up earth known as Elliot's Salient. Behind the Confederate lines and about 400 yards northwest of the salient, was a ridge called Cemetery Hill. This ridge commanded the city of Petersburg and the Southern lines. If the Federal army could cross the 100 yards that separated the two lines, break through the works and take the ridge, Lee would be forced to withdraw from Petersburg and Richmond would be made unten-

able. The main obstacle to this movement was Elliot's Salient.

Colonel Pleasants was pondering the situation when the chance remark of a nearby soldier gave him the idea for which he had been groping. The soldier had said, "We could blow that fort out of existence if we could run a mine shaft under it." The colonel walked slowly back to his tent among the trees. He found one of his officers there and together they discussed the possibilities of such an enterprise. The next evening he went to the headquarters of General Potter, his division commander, and proposed the plan to

A sheet of flame shot high into the air. Great blocks of clay were hurled up together with

him. General Potter was interested and wrote a note concerning it to General Burnside, the corps commander. Burnside wrote back and asked him to come to his headquarters with Colonel Pleasants. After hearing more details he seemed pleased with the proposition and authorized Pleasants to begin work. The next day, the 25th of June, the ground was broken. Meanwhile, General Meade (at left), commanding the army, had agreed to the prosecution of the work.

Directly east of the Confederate fort, about 100 feet behind the advanced Union entrenchments, ran a ravine lined with trees. Here, at the head of the ravine, Pleasants decided to begin the tunnel.

Pleasants had been a mining engineer many years before the war and most of the men in his regiment had been coal miners. All this practical experience fitted the 48th perfectly for the job. But from the beginning they were handicapped by the lack of proper tools and because of this the work was made much more difficult. Although he often made application for equipment and supplies, Pleasants found it almost impossible to get anything. He had to straighten army picks to make mining picks, he had to send out his own men with wagons to find timber for supports, he was not supplied with proper surveying instruments. He could get no assistance from anyone, but had to

do everything himself. Pleasants afterwards stated that the work could have been done in one-third or one-fourth of the time it actually took, if he had been supplied with the proper tools and materials.

He was probably thus neglected because Major Duane, the chief engineer of the army, and General Meade had no faith in the enterprise. They said that Pleasants would "either get his men smothered for want of air, or crushed by cave-ins; or the enemy would find it out, and it would come to nothing." Despite these difficulties the work went on. The men were very much interested in the success of the mine and every soldier went about his work as if its success depended on him alone.

The chief concern was the disposal of the earth that was continuously being excavated. The men nailed handles to empty cracker boxes, iron-clad them with hoops from old pork and beef barrels, and used these makeshift containers to remove the earth. From the mine it was carried down to the creek and dumped. Every night the men cut bushes to cover up the piles of earth and keep the enemy from seeing it and guessing what was going on.

The tunnel was supported along its whole length by props, ranging from three to thirty feet apart according to the nature of the roof. Only one serious accident occurred during the mining operations. Some

timbers gave way nearly causing a cave-in. But the roof was quickly braced with heavy posts, and afterwards the supports were put closer together.

The mining continued 24 hours a day without interruption. Two hundred and ten men were employed over every 24-hour period, although only two could work at a time at the tunnel's extremity. At first only a few men were used but as the tunnel lengthened, the number increased until the whole regiment of 400 were employed.

For ventilation, Pleasants had the men sink a shaft about two feet wide from the rifle pit to the tunnel and close the mouth of the tunnel with an airtight canvas door. They then laid a wooden pipe from the extremity, where the men were working, to the mouth of the tunnel and built a hot fire under the shaft. The fire drew the foul air from the tunnel, and the vacuum created drew the fresh air in through the pipe.

Pleasants calculated by triangulation the distance he would have to run the shaft. He had to do his surveying from an advanced trench exposed to Southern sharpshooters. But by covering his head and his theodolite with burlap and having some of his men distract the enemy marksmen, he successfully accomplished his work.

When the project was about half-



with men, cannon and caissons. Then the Federals charged Cemetery Hill





The calm before the storm—Federals awaited the blast

way advanced, another difficulty presented itself. The miners ran into layer of marl that was putty-like in consistency which slowed the work. To avoid this stratum of clay, they started an incline that rose about 13 feet for every 100 feet traveled.

The main shaft was completed on July 17th and work was temporarily stopped as word had gotten around that the Confederates were countermining. At midnight Pleasants decided to determine for himself if there was any danger. With two men he crawled, without lights, to the head of the tunnel and listened with his ear to the ground. For 30 minutes they waited in the cool, black depths, straining their ears, but could hear nothing. Pleasants decided that the rumor was unfounded and the next day work was resumed. (As a matter of fact, the Confederates were well aware that the Federals were mining somewhere on the line, but exactly where was not known. One countermine missed the Union shaft by only 100 yards.)

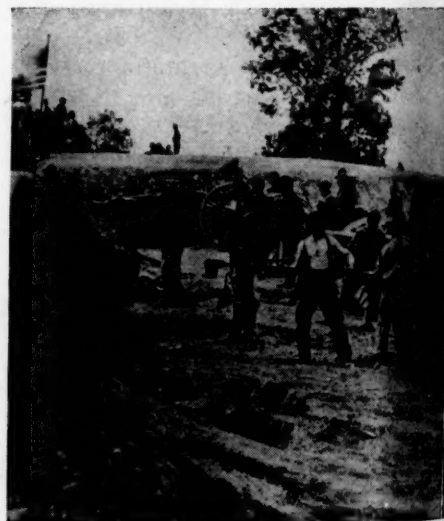
Two lateral galleries were run at right angles to the main tunnel and

at 6 P.M. on July 23d these were finished and the mine was ready to be charged.

The main gallery was approximately 511 feet long, the right lateral gallery was 38 feet long, and the left lateral gallery was 37 feet long. The average height and width measured four by four. The regiment had taken some 10,000 cubic feet of earth from the mine in the 28 days they had worked on it.

On July 27th the mine was charged. General Burnside wanted to use 12,000 pounds of powder, but it was decided to use 8,000. The charge consisted of 320 kegs of powder, each containing 25 pounds. The mine was now ready and Pleasants had only to await the order to spring it.

General Grant had made a feint on the north side of the James which had drawn the greater part of Lee's army across the river. Seeing this opportunity, he telegraphed to General Meade that the time for exploding the mine had come. The attack was to be made while the Confederate forces before Petersburg were



Above ground, situation normal...

weakened by the large detachment of troops covering Richmond.

General Burnside's original plan was to put his newly formed colored division in the lead since they were fresh troops and had been well drilled for that purpose. Meade, however, insisted that it was too much of a gamble since they were

untried in battle. He referred the matter to Grant who agreed with him that the colored troops should not spearhead the assault.

There was nothing to do but obey orders, so Burnside called in the commanders of his three other divisions to discuss the conditions of their units. Since all three divisions had certain conditions in their favor, Burnside determined to let the division commanders draw lots. The choice fell on the 1st Division, commanded by General Ledlie. The other three divisions were to follow the first.

On July 29th, the day before the mine was to be exploded, General Meade issued his battle orders.

Major General Burnside, commanding the IX Corps, was to move his troops into position that night and the next morning was to form them for the assault and clear a way through his earthworks and abattis.

Major General Warren, commanding the V Corps, was to concentrate all available forces and prepare to support the attack of General Burnside's assault troops.

Major General Ord, commanding the XVIII Corps, was to form his troops in rear of the IX Corps and prepare to support the assault of General Burnside.

Every preparation was to be made for moving forward the field artillery of each corps.

Major General Hancock, commanding the II Corps, was to be prepared to follow up the assaulting columns.

Major General Sheridan, commanding the Cavalry Corps, was to move out at daylight against the Confederate right.

At half-past three on the morning of the 30th, General Burnside was to spring the mine and his assaulting columns were to move rapidly on the breach and seize the crest in the rear. Burnside was to be followed by General Ord, who would support him on his right, and by General Warren, who would support him on his left.

Upon the explosion of the mine, all the artillery in the line was to open on the Confederate works.

Early in the morning the men fell into ranks under arms and waited for the explosion.

At 3:00 A.M. Colonel Pleasants buckled on his sabre and pistol and made his way down a path to the ravine. He reached the mouth of the tunnel where several soldiers were sitting on the ground. They rose and saluted. He struck a match and looked at his watch. It was 3:10.

Upon being told that everything was in readiness, he entered the tunnel with two men and lit the fuse. The flame sputtered, and giving off a burst of acrid smoke, moved rapidly into the darkness. They crawled out of the tunnel and waited expectantly. The minutes passed, but there was no explosion. Four o'clock came, and four-fifteen. Finally, two volunteers went into the mine to



Bettmann

General Burnside

determine the cause of the delay.

A continuous fuse had not been furnished and Pleasants had been forced to splice a number of shorter fuses. At one of these splices the flame had gone out. In a few minutes the two men who had gone into the tunnel hurried out again after re-lighting the fuse.

"It's all right, Colonel," they said, "she's burning."

Finally, at 4:44 A.M., the mine exploded with a terrific roar, shaking the ground like an earthquake. A solid sheet of flame shot high into the air followed by a great black cloud of smoke that mushroomed skyward. Great blocks of clay were hurled up together with men, cannon and caissons.

Even the Federal soldiers, who were prepared for the explosion, were dazed by its force, but they recovered quickly from the shock.



below, men worked day and night



Artillery units were prepared to move forward

National Archives



National Archives

Upon the explosion of the mine, Union guns were to open up



National Archives

A major Federal obstacle—well laid Confederate breastworks



National Archives

The calm after the storm—desolation and 5,900 casualties

"Forward!" shouted their officers, and with a yell that was drowned by the deafening roar of all the artillery in the line, the regiments scrambled over the works and surged forward toward Cemetery Hill.

The Confederates were stunned by the terrible and unexpected upheaval. The explosion overwhelmed Pegram's Battery of four guns and the entire 18th South Carolina Regiment along with several companies of other regiments. The Federal charge, however, aroused the survivors who raised a cheer and hurried back to their places where they began firing on the advancing masses of men. Some of the men of the 18th managed to extricate themselves from the earth that covered them and join in the defense of the line.

The Federals had not advanced 25 yards when a murderous fire was opened on both flanks. Men began falling fast. In the leading brigade they were ordered to throw themselves to the ground. The order was quickly obeyed as showers of bullets passed over their heads. The command was then given to make for the fort quickly. Again being met by a hail of bullets, they ran for the breach and jumped, rolled and tumbled hastily into the crater made by the explosion.

The crater was about 135 feet long, 97 feet wide, and 30 feet deep. It was a terrible sight. Lieutenant Chase of the 32d Maine described what he saw. "Beneath our feet were the torn fragments of men, while upon every side could be seen some portion of a man protruding from the sand. Buried with these... were broken cannon and fragments of every description."

More troops pushed into the crater and the trenches on either side were taken. Two-hundred yards were occupied to the north of the crater and 30 yards were taken to the south of it.

The Confederates kept up a hot musketry fire and succeeded in forcing the Federals to stay under cover.

After the 1st Division came Wilcox's division, Potter's division and Ferrero's colored division. These units, unable to advance farther, crowded into the crater and adjoining trenches.

Every unit that participated in the advance was exposed to a murderous fire. The air was filled with

missiles. Soldiers were dropping fast and grape shot tore great swaths in the charging ranks. The color guard of the 30th U. S. Colored Regiment was plowed through with a charge of grape, and no sooner were the colors caught up again than the top of the color-lance was carried away by another shot.

The Confederate artillery at this time was very effective. Besides the remnants of Elliot's Brigade, the guns were the only barrier between the Federal army and Petersburg. Wright's Battery, to the north of the crater, fired 600 balls into the attacking columns, while a single gun to the south was enfilading the Federals from that side, and some nearby mortars were dropping shells into the captured line. Flanner's six-gun battery, on the plank road behind the crater, did much to beat back the Union advances with double charges of grape and canister while Federal shells burst all around them.

At 6:10 A.M., a fast-riding staff officer had reached General Lee from General Beauregard and had informed him of the Federal attack. Lee had immediately ordered up two of General Mahone's Brigades from the Confederate right.

Mahone quickly withdrew his own Virginia Brigade and Wright's Georgia Brigade from the trenches and formed them behind the lines. The men were ordered to remove blanket rolls, knapsacks and other baggage. They were to carry only muskets, ammunition and canteens, which, to the veteran, plainly indicated serious work. They were then marched rapidly north to a point opposite the scene of action, down a covered trench, and into a ravine that ran parallel to the Confederate line immediately behind the crater. Mahone, observing the numbers of the enemy, sent a courier to bring up Saunder's Alabama Brigade.

The Georgians formed on the right of the Virginians and the troops flattened themselves on the slope of the ravine, awaiting the command to storm the works.

The Virginia Brigade was ordered forward and every man sprang to his feet and moved forward at the double-quick.

Just before the Confederate charge, the Federals had been about to make a charge themselves. They had hardly raised their heads when the

cry broke out among the men, "The Rebels are charging! Here they come!"

Lieutenant Bowley, who was in the crater, described what he saw.

"Looking to the front I saw a splendid line of gray coming up the ravine on the run. Their left was nearly up to the bombproofs and their line extended off into the smoke as far as the eye could see."

The Virginians received a hot fire and obliqued to the left where they swarmed into the trenches on that side of the crater. A terrific hand-to-hand struggle followed in which the bayonet and the butt were used effectively. The Confederates secured the trenches and opened a flanking fire on the Federals in the demolished fort.

The Northern soldiers still held the crater itself, and to drive them out, the Georgia Brigade was ordered forward from the same ravine. They made a gallant charge but they were also forced to oblique to the left because of the intensity of the fire. They took shelter among the works occupied by the Virginians.

In the crater, the Union soldiers were desperately holding on. The July day was terribly hot. The wounded cried for water, but the canteens were empty. A line of men around the crest of the crater were loading and firing as fast as they could but they were dropping fast, most of them shot through the head. As the soldiers were hit they rolled down the slope to the bottom, and in places they were piled four and five deep. The Confederate artillery, by this time, had found the range and were dropping shell after shell into the crater. An enfilading fire came through a ditch that ran into the crater and caused great loss of life. General Bartlett ordered a barricade built across it. They began by throwing in lumps of clay, then someone shouted, "put in the dead men." Acting upon this suggestion, the men piled a large number of bodies into the trench. Many tried to run the gauntlet back to the Federal lines but few succeeded. Nearly every man who attempted it fell back riddled with bullets.

After the charge of the Georgians was repulsed, ammunition was very low and the defenders searched the cartridge boxes of the dead and

wounded. About this time, two men reached the crater from the Federal lines, each carrying all the ammunition he could manage in a piece of shelter tent.

The Alabama Brigade, sent for by General Mahone, now came up and prepared to make a final charge. They formed in the ravine and General Mahone explained the situation to the officers. When he had given them their orders he said, by way of emphasis, "General Lee is watching the result of your charge."

Orders were given to load, and to fix bayonets. The brigade carried into battle only 628 men, but they were the last of the reserves and they knew they had to succeed. The general gave the command, and the brigade charged forward. They were met by a burst of fire from the crater and many went down, but the survivors increased their pace and threw themselves on the ground close to the edge of the crater. With their bayonets, many pushed up their hats, which, as expected, were riddled with bullets. Immediately they sprang over the edge into the crater and commenced a fierce hand-to-hand struggle. Muskets with fixed bayonets were thrown like harpoons or were used as clubs.

The fort had been blown into two compartments, both of which were occupied by the Federals. After the larger had been captured, the Federals left in the smaller one cried out that they would surrender. Meantime, thousands had run for the Federal lines, preferring to risk bullets to long imprisonment.

The Union attack was a disastrous failure. It was largely the result of crowding so many troops into such a small area under intense fire, and the consequent loss of organization. Also, the failure of the other corps to adequately support Burnside's attack allowed the Confederates to concentrate their fire entirely on the IX Corps.

The price paid by the Federals amounted to 4,400 killed, wounded and missing, while the Confederate loss totaled about 1,500.

The Confederate army saved Petersburg that day and in doing so, captured 1,100 prisoners and 20 regimental colors.

General Lee said of the battle: "Every man in it has today made himself a hero."

US & MC

I GOT A MAD ON



[A Punkin Holler Pundit]

Dear Sir:

If my uncle was still in the writing business he would pick up the gauntlet, flung, still dripping with the river water which one of his fellow writers had wet it in, at the feet of some of us old foot-sloggers. Lest (as another of the writing trade boys loves to begin his sentences) I get you mixed up regarding the target of my mad I had better stop to explain a little bit.

My name is Backstrap McGinnis. Of course that's not my real name. My real name is Horace. That Backstrap gag is a sort of short title some of the boys in the 7th gave me once when we was having community dieting on some "C" rations they took off them Egyptian mummies or Julius Caesar's legions. The McGinnis is the real McCoy (except that McCoy was Scotch and my folks was Irish). On my mothers side the name is McGurk and the uncle to which I have already referred is old Base Plate McGurk. He was famous for two things, or three maybe, but usually we just refer to the two of which he was proudest. He was, and I suppose still is maybe, the best mortar man the Corps has ever seen. Then for awhile he had a call to write and was a real prolific military analyst whose writings was widely read until he dropped back into obscurity.

It isn't generally known how it happened he gave up writing. Some, I have heard talk (not knowing I am a close relative of Uncle Base Plate's), say he lost his inspiration. Fact is he was a proud man and when his eyes give out he quit. He could of gone on if he hadn't been too proud to wear glasses while he did his research, but the lights in the bars got so poor

you couldn't tell what the price of drinks was anyway until they brought your bill, whether you wore glasses or not, so he gave up.

He gave me a lot of pointers though, and they are now standing me in good stead. He always told me never to write for what I thought I would get out of it. He said if I was going to be a success, like him, I had to think about what I was going to put into it. He said us writers had to have a message to deliver if we hoped to write with persuasion.

Now being a natural mortar man myself and the rightful heir to the unique technique that made mortar shooting as near a pleasure as a fellow experiences in his whole life, it was a great disappointment to me to see our beloved, and near departed, (if we believe what we read in the GAZETTE) weapons so berated as was set forth in a recent article which shall be nameless because I don't wish to be thought narrow minded.

Now the author of this nameless article, who shall also be nameless, seems to have cut his teeth on a VT fuse—maybe some of the smoke from the smokeless powder sort of reduced his visual acuity (it will do that if you get an overdose of it) every mortar man knows that—but then perhaps they don't teach that in the artillery.

I do not wish to start a feud between mortar men and artillery men. But the code of the hills is strong in my veins and being an expert on mortars, of a sort, I must, as a duty, supply the missing half to some of the truths our nameless author set forth in his nameless article so that some of these 03 fellows won't get anything but the whole truth (the 08s can look out for themselves). As I always say, I deplore a fight

between Marines, when there is anybody else to fight, even though the best fights I have ever been in have been of this sanguinary variety.

I read this nameless article and I talked to some of the Old Breed and some of the New and, whereas you can usually always find some guy who is willing to let you name your topic and give you first choice as to which side you want, as a prelude to social intercourse, I couldn't work up much spirit when it came to talking about giving up any of the weapons we have, to coin a phrase, "in our arsenal." Nobody seemed to have any conviction, except our author, who shall be nameless (I certify), that we can afford to give up any we have as long as we have to be ready to fight the people who are looking down our mortar tubes, any time, any place. To us Meadowland Marines we look at it like the lady with fifteen kids who said none she had was any dearer to her than any other and she couldn't spare a single one. We are aghast that a fellow (nameless) would suggest we should abandon a family of weapons which, together with the artillery and close air support and naval gunfire give us the means to maneuver an attack.

Why do a few poor little old pieces of stove-pipe and gas-pipe merit the evil-eye and the wrath that has been poured out on them? If they was of so inconsequential a degree who would give them house room? Wha hoppan?

Incoming mortar fire is most annoying on an empty stomach. It has caused ulcers, heart attack and athletes foot. It has been able to bridge the language barrier on the outgoing circuit and speak better than all the "voice" programs combined to our late enemies. Those mortars made plenty of them Commies "late" dur-



ing the recent unpleasantness in Korea.

Incoming mortar fire has been so annoying that, even though mortars are uneconomical, I am told a lot of good U. S. dollars has gone into the smelter to research and develop a counter mortar arrangement—the same which is supposed to make our mortars as obsolete and useless. (Now, since you brought the subject up, *there* is something we might “hang onto for sentimental reasons,” but leave us not suggest that all the lugging of mortars over the contours, that has been logged in the credit ledger, was done because mortars make nice souvenirs.)

My mother, on my uncle's side, used to have an old saw about “Beware of the Phoenecian bearing gifts.” To keep my record as a diplomat and not create an international incident, I must insert a note here and point out that the foregoing is a figure of speech and no insolence is intended, but as Sam Goldwyn once said “For your information I would like to ask a question?” Why all this sudden concern over the inability of the infantry to move their mortars and to get the bullets to them? Now we are to have a “new look.” The apparent emptiness of the battlefield is going to be for real. No mortars, no hands, no nothing. Not even no battle.

Economy is a wonderful item. I have voluntarily given up eating at times when there weren't no rations for days on end. No other service is as careful to get its money's worth out of what we have as is the Marine Corps. We could save money by cutting off one leg and not have to buy two shoes and two socks and have two pants legs in our pants, and we could say our clothing system “has not been measured by the yardstick

of economy” until we had done it. We could save money on the premiums we pay on fire insurance on our houses by burning them down. We could save the whole federal budget for defense by disbanding our whole defense setup in the name of total economy if we took the figures of them efficiency experts.

The boys tell me that this indictment of the mortars, due to a siege of malfunctions in the 2d Mar Div, is what the TV give-away programs like “Author Meets Critic” call “talking out of context.” Uncle Base Plate's eye trouble began when he got a blow-back while shooting for record with an '03 rifle before the war. One of the old “Gunnies” was on the old “Wyoming” when they had a muzzle burst. I hear they had some short rounds in the 3d Mar Div from the 105's a couple of months ago. It seems to me all weapons are dangerous—even a pen. I do agree that being a Marine is rather a hazardous business at times and we should never take a risk we don't have to.

When an article like that nameless one shows up in the GAZETTE I wonder if we aren't too slow. This is a daring suggestion about transferring mortars to Class IV, and saving 1,707 Marines per division is real progressive, but perhaps this is more cautious than we should be. Has any thought been given to the transfer of all the rifles to Class IV too? We could save 3,159 more men that way. Then the communicators could tell the artillery where the enemy are and the artillery (less those in Class IV) could murder the bums.

I'm too young to know, but Uncle Base Plate told me about the test of the 1903 vs the M1 rifle. The “sentiment” which prevented Major General Commandant Holcomb from

never “OK”ing the first “Garand” looked like a barrel extension which never quite kept in alignment with the barrel and produced erratic results. Fellows like Ashurst, Edson, Lloyd, Mathieson and Shiveley was not given to sentiment. The Marine Corps hollered so long and loud the Army changed the design using a longer barrel with a gas port drilled in it which is about the same weapon as we might have today and a mighty good one. Maudlin is a good word for us writers, but it doesn't gee with the marksmanship objectives which was always the first thought with Marines (and still is, I hope).

Well, Editor, I must close. I hope you ain't mad at me because I took some exception with your prize story. First time I ever seen Uncle Base Plate in Blues I won a prize with my oratory, and on the way home from the fair where I won it, Uncle B. P. really took me apart. Said I talked like I had a mouthful of mush and I'd never be able to be a DI at that rate. Said I still could learn a lot from the old fellows if I'd listen more and not talk so much.

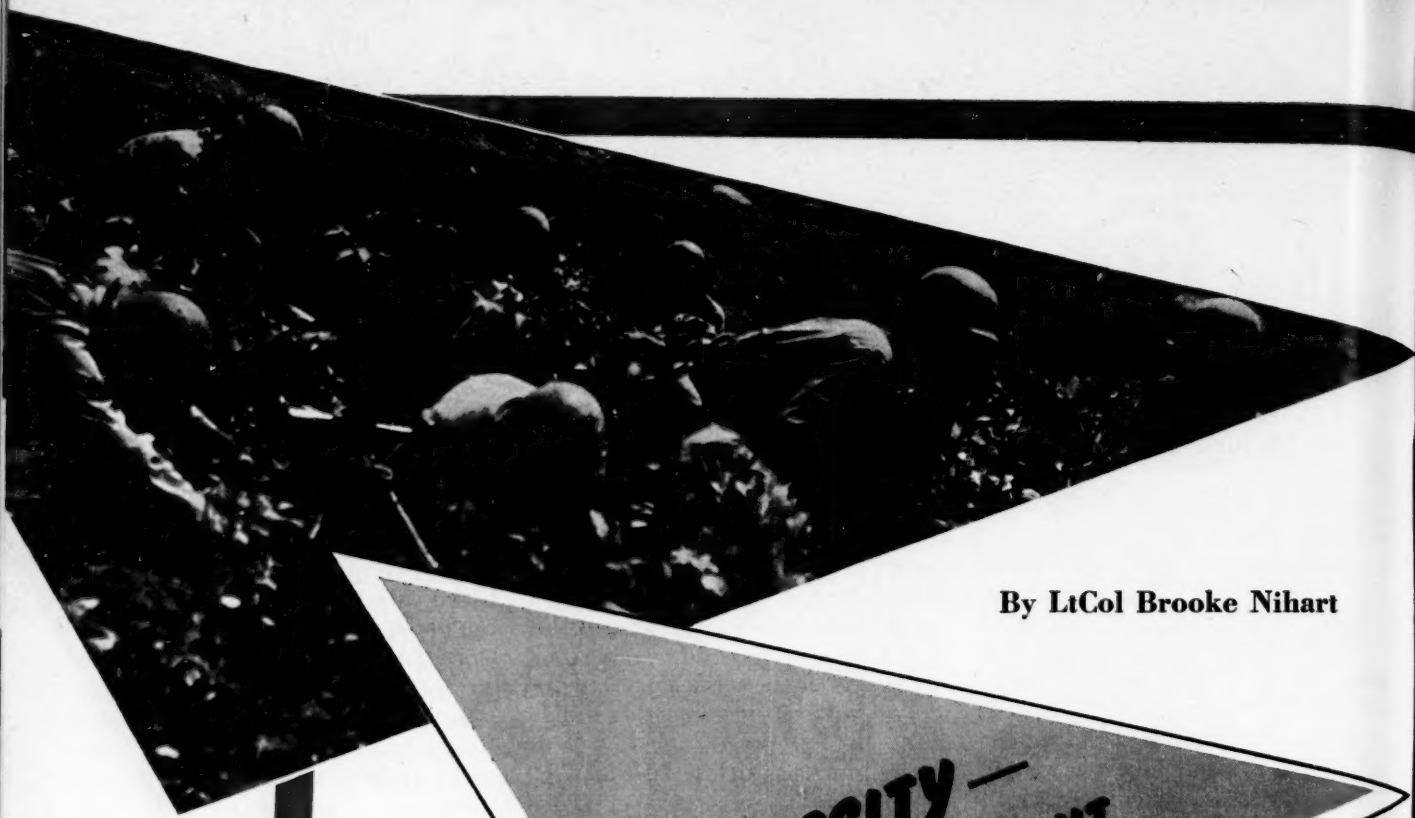
Backstrap

BACKSTRAP

P. S. I have seen some of the new Love series T/Os and see that not only does the CMC not agree with the nameless author but he has even given us more of them sweet old trouble makers.

If times get hard and you publish this in your columns, please send the proceeds to the Marine Corps Memorial Fund. Somehow I think mortars and that monument will both be around a long, long time even if they put the monument in Class IV.

US MC



By LtCol Brooke Nihart

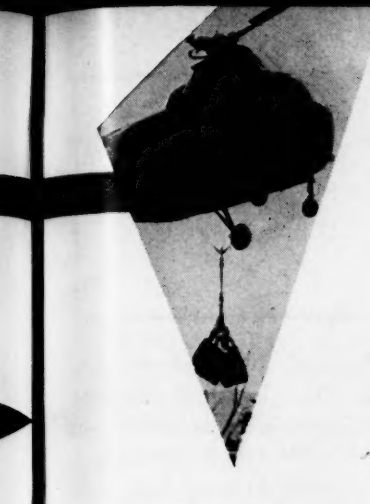
NECESSITY — NOT SENTIMENT

It's not a nostalgic notion that dictates the retention of the mortars. It's good, common sense

IN YOUR PRIZE WINNING ESSAY, *Of Mortars and Men*, the author charges that the Marine Corps is hanging on to mortars for sentimental reasons. This contention he supports with an indeed formidable bill of particulars. He charges therein that, "factual examination indicates the infantry mortar possesses critical shortcomings." He itemizes these as follows: (1) "an uneconomical appendage," (2) "a treacherous tool," (3) "engineered on a ballistically unsound basis," and (4) it is vulnerable to detection by counter-mortar

radar, and subsequent destruction. He then properly concludes "The mortar question can be resolved only on the basis of irrefutable facts."

This is all very well and, as LtCol Wade points out, the Marine Corps weapons system should be evaluated objectively. But there is a catch in his evaluation. It is not entirely objective. Some of his "irrefutable facts" are refutable; others are open to question or interpretation, and those which are "facts" have been carefully chosen to support one side of the question. But this isn't



enough. He also shows himself to be a victim of the specious "one weapon" thinking.

Let us examine some of the more important charges and their supporting contentions. First, under the general charge of being uneconomical, we learn that having mortars at each infantry echelon from company to regiment is: (1) an unjustified duplication of effort, (2) a reduction in flexibility, (3) an increase in the span of control and (4) a complication of logistics.

Is placing under the commander, at each level, the tools he needs to do the job (in this case 60mm mortars in the rifle company, 81mm mortars in the infantry battalion) an unjustified duplication of effort? The duplication is more apparent than real and is most certainly justified. Adherence to the time and battle-tested balanced force concept of our naval services is justification alone. This concept gives to each commander the forces he needs to accomplish his mission. In accordance with this, each organization needs and has organic to it, curved trajectory, high-explosive weapons for reaching the enemy who is behind cover from flat-trajectory weapons. These weapons have a range capability sufficient to reach beyond the flanks of the unit and appropriate to the unit's mission and depth of combat. Thus we find hand and rifle grenades in the rifle squad and platoon; various sized mortars in company, battalion and regiment; light and medium artillery in the division and medium, heavy and atomic artillery at corps level.

The necessity for this is patent, the

logic inescapable. A commander, regardless of the pretty theories of the "thinkers," cannot depend in every instance on a weapon he does not command. Artillery is, and should be, in direct support of the infantry, not attached to it. This is not to say that artillery fails. However, communications have been known to fail over the several thousand yard gap between forward observer and battery. With mortars close at hand and organic to the infantry, close support at all times is assured.

Is having three different mortar observers plus an artillery observer in a company OP a duplication of effort? Decidedly not. It might be just as decidedly dangerous to the observers and company headquarters if, after putting all these eggs in one basket on the crest of a hill, they drew fire. But any company commander guilty of this tactical blunder deserves to be relieved before he is killed along with his entire command group. Depending on the situation, the cagey company commanders disperse their various observers by assigning them to platoon leaders, spreading them laterally in positions of observation or concealing them on the reverse slope of the OP and calling them up one at a time when needed. Life is usually longer this way.

Another important point is that in this apparent duplication of observers, there is strength. As pointed out, communications have been known to fail in combat. Duplication of observers means alternate communication channels and replacement observers. Supporting arms communication links with the battalion and regiment supporting arms centers, as well as with their various supporting arms fire direction centers. By means of this link in SAC, an artillery mission coming in on a mortar wire, for example, can be relayed to the artillery FDC. The mission could be requested and adjusted by either mortar or artillery observers. This is not idle theory. It has been done and will be done again. Thus, strength and flexibility under the exigencies of combat are achieved.

Artillery's high angle fire is cited

as being able to do anything that mortars can do. With due appreciation for the stellar accomplishments of artillery, this isn't necessarily so. The maximum range of the 105mm howitzer is approximately 12,000 yards, firing at an angle of 45°. The range of the new 4.2-inch mortar M30, with which the Marine Corps is now equipped, is about 6,500 yards. Realizing that the mortars will be several thousand yards closer to the front lines than the artillery, we note no great range disparity. This principle applies, to a lesser degree, to the 81mm mortar with a maximum range close to 4,000 yards (with light shell using charge eight). Because of a critical lack of overlap between range zones, with various powder charges, there are dead spaces in artillery's high angle fire which cannot be reached with any charge.

From the standpoint of dispersion, the artillery doesn't particularly outclass the mortars. When firing high angle, high altitude winds cause an increased dispersion as the shell rises. The extremely long time of flight and increased drift further complicate matters. Even artillery gunnery publications admit that unobserved





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high angle fires have unreliable accuracy as a result of these factors.

Our artillery enthusiast bleeds for the plight of the infantryman, hip deep in the mire who is "chronically short of trucks" and must, perforce, man-handle his mortar ammunition. One obvious answer would be to give the infantry a few of the needed trucks. "But even the jeep cannot go everywhere," is the obvious retort. This problem has been solved adequately in practice, but perhaps the word travels slowly. Through the swamps, jungles and fire swept open flat-lands, armored tracked vehicles have been used successfully to get the mortar ammunition to the positions. In the mountains, native labor has supplemented the meager basic load of the mortarmen. When this, because of distance, has been insufficient, helicopters have resupplied the mortars right to their positions. Lest there be more worry over the travail of the mortarmen who must displace forward without the aid of prime movers and roads, suffice to say that helicopters have helped in displacements too.

In truth, the mortarman isn't so badly off in the matter of hand carrying his ammunition. One round of 81mm heavy shell (M56) weighs 11 pounds. Its bursting charge is 4.3 pounds of TNT. One round of 4.2-inch shell weighs 25 pounds and is usually trucked to the mortar positions. Its bursting charge is much larger than either 81mm or 105mm. One round of 105mm artillery ammunition weighs 42 pounds, complete. Its bursting charge is 4.37 pounds of TNT. The artillery is

Weapon	Rounds Per Minute	
	Short Bursts	Sustained
81mm	30 rd/min	18 rd/min
4.2-inch	20 rd/min	5 rd/min
105mm	{ 8—1st ½ min 4—1st 4 min }	3 rd/min
155mm		1 rd/min

spotting the 81mm mortars 31 pounds, or almost four to one, for an increase in .07 pounds of TNT delivered to the target. Admittedly the 105's range is greater, but not spectacularly so when you realize that range forward of the front lines is what counts, and artillery is necessarily much further back because of need for protection and minimum range requirements.

Furthermore, although more fragments from the 105's greater weight of metal result, the concussion is no greater than the 81mm and less than the 4.2. Also, the mortar shell, because of its angle of fall, is often more effective in producing casualties. Assume a normal situation where the 4.2-inch mortars, with a maximum range near 6,500 yards, are in position 1,000 yards behind the forward infantry positions and the 105mm artillery, with a maximum range of approximately 12,000 yards, is 4,000 behind the forward infantry. Thus, instead of having twice the range of the 4.2, as the maximum ranges would indicate, the 105mm actually has only a 50 per cent greater effective range.

Permit me to refute further the charges of duplication and non-economy made against the mortar. When the heathen hordes are pouring in on your position, or the last of the preparation fire is being laid down on the objective right to your front, you want something that can really pour it on and blanket every yard of that route of enemy approach, or your objective. Artillery does this well and we depend on it for many of the reasons favorable to artillery that the author has recounted. But mortars are an invaluable and irreplaceable supplement. In some respects they can do it better than artillery. One of these respects is in rate of fire which, as shown in the table above, is three-to-six times greater than that of artillery.

The obvious conclusion is correct. With mortars the target is covered

more intensely. The cumulative shock is greater. There is less time between rounds for the enemy to move through the target area.

Even if we were to grant that, technically, artillery could do the mortars' job by means of high angle fire, artillery would still come a cropper in trying to do the mortars' tactical job in addition to its own. The fire unit of the artillery is the battery of six howitzers. Normally, there is a battalion of three of these batteries supporting an infantry regiment. At any given time this battalion can fire three concentrations or three defensive normal barrages. In effect, this means three different targets can be engaged on a regimental front of from 2,000 to 6,000 yards at one time. True, the batteries can shift from target to target in a matter of minutes and battalion can mass them with equal ease. However, the mortar units in the hands of each commander greatly enhance his ability to hit multiple targets to his front with a variety of long range, high explosive and smoke shells suitable to every situation. There are 27 60mm mortars in the regiment. Assuming that two-thirds of these are on the front line at a time, 18 targets can be engaged. There are 18 mortars (81mm) organic to the regiment. If two-thirds of these, that is 12 mortars, are in position to cover the front, six more targets can be engaged (the two-mortar section is the usual fire unit for this purpose).

The two 4.2 platoons of the mortar company add two more targets to this number as the 4.2s usually fire by platoon. This gives us a conservative total of 26 different targets which mortars can engage at one time on a regimental front, against three for the artillery. Of course the 60s can't hit them as heavily as the others, and can't cover the entire regimental front by shifting fires as can the 4.2s or artillery — and often the 81s. But the important point is that multiple targets can be covered

to the front of each unit at one time.

One of the principal missions and capabilities of artillery is to give depth to combat; that is, to hit the enemy rear areas as well as his front line positions. If artillery habitually used high angle fire to perform the many missions now performed for the infantry by its mortars, there would be no depth to combat and enemy rear areas would suffer little.

For the information of those who haven't heard, the mortars can and do mass their fires; the 81s by platoon and the 4.2s by company. Granted, artillery can mass to a greater range and across a greater front.

Let us look at a few more significant comparisons. The 105mm howitzer M1 in firing position weighs over 5,000 pounds, or over 47 times as much as the 115-pound, 81mm mortar M29 and eight times as much as the 626-pound, 4.2-inch mortar M30. Furthermore, it costs \$13,380 or 15 times as much as the \$894, 81mm mortar and seven times as much as the \$1,800, 4.2-inch mortar. The 105mm howitzer requires 620 cubic

third that of the mortars, and to a range forward of the front lines only 50 per cent greater.

Having a mortar unit under one's command does not complicate the exercise of that command. The limit of an infantry commander's span of control has not been reached with three rifle units, a machine-gun unit and a mortar unit plus the partial and part-time control over external supporting units.

Contrariwise, an infantry commander who has progressed from company, to battalion, to regimental commander has had to consider, provide, plan for and command his own supporting units as well as his maneuvering units, and has received an invaluable training in the employment of combined arms. This qualifies him for command of larger units of combined arms with organic artillery. In no other career line is this broad experience to be gained.

One inescapable conclusion is salient here. If mortars are to go in the rubbish heap along with the French 75 and the '03 rifle, something must be done. We had better take the men thereby saved, add more men, buy more expensive 105s and trucks and activate more artillery batteries, as loss of the mortars leaves a tactical vacuum which must be filled. If more artillery at the expense of mortars is what the author,

by implication, has in mind, it will be recorded as at least the grossest literary attempt at empire building by claiming every activity concerned with high explosive projectiles be relegated to the artillery.

From all of the above, we must conclude the mortars compare quite favorably with artillery on the basis of economy and performance. Mortars are economical. Moreover, mortars are neither an appendage nor a duplication of effort. Rather, mortars are members in good standing of the well balanced landing force — the Marine Corps weapons system, if you will. Within their scope of employment mortars are flexible. They do not increase a commander's span of control beyond his capabilities, but afford him experience in commanding combined arms that he will receive nowhere else in the service. Instead of complicating logistics, mortars burden the system less than artillery on a round-for-round and weight-of-TNT-delivered basis. Yes, mortars pay their own way from the standpoint of results delivered, cost, weight, shipping space and men employed. They perform a tactical role of which artillery is not only technically and organizationally incapable, but could only perform at a detriment to its own missions. Without mortars we might well be reduced to General Grant's plight be-



There will always be a way

feet shipping space without its prime mover so essential to mobility, or 100 times as much as the six cubic feet needed for the man-mobile 81mm, and 30 times as much as the 20 cubic feet for the 4.2-inch. Yet with this great disparity in weight, cost and shipping space, the 105mm howitzer delivers practically the same amount of TNT as the 81mm and considerably less than the 4.2-inch at a rate of fire one-sixth to one-





The 105mm — \$13,380 each

fore Vicksburg. He lacked much-needed mortars so he improvised them from hollowed out tree trunks reinforced with iron hoops. In any case the answer could not be high angle fire or more artillery.

Is the mortar a "treacherous tool" in training and combat by reason of premature bursts and short rounds? High explosives *are* dangerous. Even rifles have blown up and accidental discharges have killed people. Premature explosions, both inside the bore and at the muzzle, as well as short rounds of both field and naval artillery have taken place in the past.

Theoretically the mortar may be "engineered on a ballistically unsound basis." Practicality disproves the effect of this engineering, however. Accuracy is comparable as is the amount of explosive delivered. By virtue of their "unsound engineering," mortars' rate of fire is three to six times that of artillery and the 81mm can deliver the same weight of explosive as the 105mm in a shell one-quarter the weight. By the same token, cost, weight and space are a fraction of the artillery's. Only in range capabilities does artillery excel and then, as has been pointed out, the disparity isn't as great as the difference in maximum range would make it appear. But the greater range is the reason for artillery. If mortars could match artillery's range we would do away with artillery.

True, mortar shells in the air are

subject to detection by counter-mortar radar.

If radar can detect mortar shells it can also detect artillery shells. This is especially so when artillery attempts to fire mortar-type missions by use of high angle fire.

Detecting the mortar shell in the air and pin-pointing the mortar position on the ground is not destroying the mortar. This we discovered many times to our embarrassment in Korea. When a mortar is set in a deep-narrow hole, a disproportionate amount of fire is required to secure a hit on it. Until a hit is secured, the mortar is not necessarily neutralized. This may be apocryphal, but it was current and accepted in the 1st Marine Division in the summer of 1952. An air observer, having located a deeply dug in mortar position, was calling in artillery fire on it. Amid the dust and smoke of closely bursting shells he could see a mortar's muzzle protruding from a hole and from an adjacent hole an arm and hand would reach out and drop a mortar shell in the muzzle. With this minimum exposure, enemy fire was continuing despite what we considered neutralizing fire.

Contrast this with the situation of artillery under counter-battery fire. We generally emplace our artillery pieces in the open. When time permits, pits are dug for the howitzers but these also are open. This makes them very vulnerable to counter-battery fire. I once witnessed 40 rounds of 122mm shell completely neutralize a battery of 8-inch howitzers for a matter of two hours. This is an extreme example, but it serves to illustrate the vulnerability of artillery in open emplacements.

Perhaps it would be valid to ask the rifleman what he thinks of the efficacy of mortars. Being on the receiving end, what does he think of enemy mortars as compared to enemy artillery? He rightly fears the mortar much more. The mortar shell comes in silently, without warning. The artillery shell comes in preceded by a several second warning whine which affords time to take cover. There is no defilade from mortars — they can reach behind any hill. But get in a little defilade and you are protected from most artillery fire. The conclusion cannot be denied. Within range capabilities mortars are more dangerous.

The so-called "trench mortar," or infantry's artillery, was developed for valid reasons. These reasons are still valid today. When the proper balance of forces is violated, battle efficiency suffers. Two very pertinent examples serve to illustrate this.

We see the mortar as thoroughly and properly integrated into the Marine Corps' weapons system and not an appendage. Only in range does it materially fall below the standard of artillery. In cost, weight, space, weight of explosives delivered and rate of fire it excels artillery. Mortars are at least as effective as artillery in the target area and perhaps more so.

Mortars have an effective tactical role not capable of performance by artillery. Without them something would have to be developed to take their place. More artillery would not be the answer.

Artillery, too, has its premature bursts and short rounds but mortarmen don't condemn it as a "treacherous tool." Mortarmen are often in the zone of short artillery rounds and take a rather sophisticated viewpoint. They classify artillery's short rounds just as riflemen consider short 60mm rounds — an occupational hazard. Not until artillerymen begin to be wounded by short mortar rounds do they have the right to condemn the mortar's treachery.

A rifle can blow up from an obstruction in the bore and accidentally kill its user. Nevertheless, it is still the "Marines' best friend." Regardless of short rounds, from wherever they may come, I hereby nominate both artillery and mortars as the next best friends of the Marine rifleman.

Artillery as well as mortars are subject to detection and location by radar. But this isn't destruction of the mortar.

Since the Marine Corps places considerable emphasis on tradition and sentiment, the artillery author mistakenly supposes that we let sentiment stand in the way of economy, efficiency or improvement. The Marine Corps can stand on its record of progressiveness and innovation. If ever mortars or artillery outlive their usefulness, you may rest assured that sentiment will play no role in hindering their abolition. It is necessity, not sentiment, that dictates retention of the mortars in the Corps. US & MC

SPECIAL FORCES

By LtCol D. B. Drysdale, DSO, MBE

✱ DURING WORLD WAR II many special forces, or what became known colloquially as "Private Armies," sprang into being both on the side of the Allies and on that of the Totalitarian Powers.

Among others, these included Raider Battalions, Commandos, The Special Air Service, Popski's Private Army, Special Boat Sections and the Italian Special Underwater Raiding Forces.

The first part of this essay will



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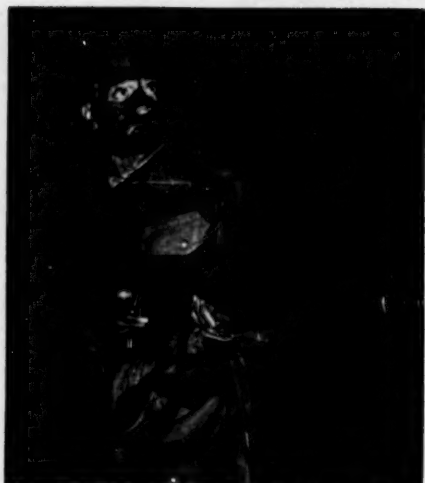
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At night—the bold approach

consider whether such operations, as were carried out by these forces during World War II, were worthwhile and paid a dividend commensurate with the effort involved.

Having reached some conclusions on this point based on history, the second part will be devoted to considering how best to meet any requirement for similar forces in any future war, with particular reference to special forces of an amphibious nature.

It is first necessary to give a definition of "Special Forces." For the purposes of this writing, "Special Forces" are defined as those forces operating in depth, whose members fight in uniform and who expect to

personnel or against materiel. When operating against personnel, the object may be to kill them, delay their arrival at the place where they are most wanted, tie them down in the defense of rear areas or, on occasion, remove them.

Possibly the best example of a small scale, killing raid was that which took place at a little village just outside LeTouquet, France, fairly early in 1941. Intelligence reported that the inn in this village was used as a rest house for German Luftwaffe pilots. They further reported that on a particular date eight ace instructor-pilots would be staying there. Accordingly, a major and six men were given the task of liquidating these individuals.

On the appointed night, the major and his men were landed by submarine and proceeded to the inn. Here they found all eight of the pilots drinking beer at the bar. They shot and killed all of them. They then withdrew in good order, without casualties, having first left evidence that the job was done by a raiding party and not by local resistance.

As far as tying down enemy troops is concerned, or delaying their movement to the scene of the major action, there are plenty of examples—for instance, the actions carried out by small amphibious raiding forces in the Adriatic during 1943. It is now reliably known that these actions alone tied down three German divisions in Greece. To take a more recent example, intelligence sources now estimate that raiding actions by ROK troops and "41 Commando" in Korea tied down 5,000 enemy troops and forced them to build more than 100 miles of trench system on the coast line.

One of the two best examples of removing enemy personnel in the last war was the abduction of General Kreipe from Crete in 1944 by two British officers named Moss and Leigh-Fermer. General Kreipe was the commanding officer of the Crete garrison at that time. Leigh-Fermer was landed by parachute, Moss from a British Coastal Forces motor launch and, with the help of some Greek and Cretan partisans, they abducted the General from his own headquarters. The second example was the abduction, in 1943, of Mussolini by German parachute troops



Wide World

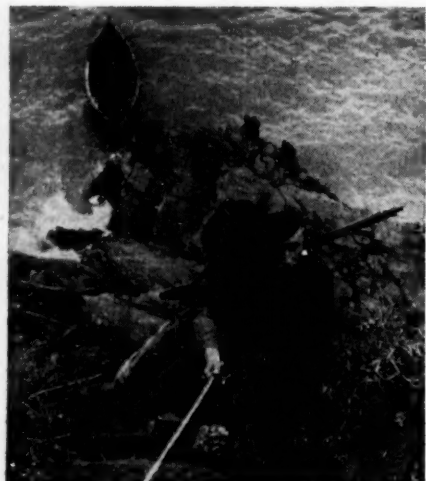
1943—Mussolini rescued by "Special Forces"

be treated by the enemy in accordance with the laws and usages of war. In other words, clandestine operations are excluded. At the other extreme, such standard formations as are given special training and equipment for a particular assault, as a division trained and equipped for an amphibious assault, are also excluded.

In considering how forces such as these were employed during World War II, the types of operations in which they were engaged shall fall under three headings: 1. Offensive Action; 2. Intelligence Operations; 3. Action with internal resistance movements.

Offensive Action

Offensive action may be against



Saidman

By day—from remote areas

commanded by an officer named Skorzeny. An abortive example of the same type of operation was the attempted abduction of General Rommel by Colonel Keyes in 1942. In this operation, Colonel Keyes and a small Commando force were landed on the North African coast at a point near a house which Rommel was believed to be using as his headquarters. Unfortunately, intelligence was faulty and Rommel was not present at the time of the raid. Had this operation been a success, it might have had a far reaching effect on the war in the desert.

As far as materiel is concerned, examples are once again legion. Possibly one of the best was the attack by the Commandos on St. Nazaire in March 1941, which has been described as the greatest raid of all. Its chief job was to render unserviceable the only dock on the Atlantic coast capable of taking the Tirpitz, and so prevent her intended use as a surface raider. It was completely successful.

Another was the raid by parachutists on the German atom bomb experimental station in Norway. Again a complete success. Finally, there is the example of the operations carried out by the long range desert group in North Africa. This force succeeded in destroying over 200 enemy aircraft on the ground.

To mention just one other type of raid against materiel, in 1943 one officer and five Royal Marines were taken to the mouth of the Gironde River by submarine. Here they were launched in three canoes and proceeded to paddle themselves up the river to Bordeaux, where they succeeded in sinking several Axis ships by the use of limpet mines. Similar operations were carried out in Singapore harbor during the Japanese occupation, and against the British in Alexandria by the Italians.

Intelligence Operations

Possibly one of the best examples of this type of operation was the combined sea and airborne attack against the German radar station at Bruneval on the French coast, in 1942. At this time the British were very anxious to discover exactly how far the Germans had progressed in the field of radar development, and they knew that this station at Bruneval was one of the enemy's most up to date installations.

Accordingly, a force of parachutists was dispatched together with two scientists and given the task of seizing the radar station, removing certain parts and photographing the rest. At the same time, a naval force stood off the beaches nearby to enable the parachutists to withdraw when their task was completed. Once again, this combined raid was a complete success and the objective was achieved.

Another example concerns an element of the long range desert group known as the "Road Watch." There was one coastal road along the Mediterranean shore which was used by the Axis armies in the western desert for almost their entire supply. You can imagine how much the road was used and how valuable it would be to GHQ to know what type of traffic went up and down it. The long range desert group provided GHQ with the information it needed.

For four and a half months from April 1942, and for seven vital weeks in the autumn during the Alamein offensive, they kept watch upon it. Week after week, 24 hours a day, there was a two-man post on the road at all times, a few hundred yards from it by day and a few hundred feet away at night. One man would spot, the other man would write to his dictation — so many new vehicles carrying an estimated so many un-sunburnt troops with clean uniforms and field cookers. It was the confirmation GHQ wanted. It told them that the Littorio Division, recently embarked in Italy, was turning up in the forward areas. The observation went on — so many German Mark III tanks, so many Mark IVs, these were the replacements Rommel was waiting for in order to take the offensive.

The value of this information coming in day after day to the higher command can be conjectured. In fact this operation involved deep penetration of the enemy's rear areas by land, using the open desert flank. But it might well have been carried out just as efficiently by penetrating the enemy's left or coastal flank.

Internal Resistance

It is not necessary to go into this aspect of special operations in any detail. Much has been written about what went on with the Maquis in France, with Tito in Yugoslavia, and

with the guerrilla forces in Malaya and elsewhere. Suffice to say that in these operations alone, the results achieved were well worth the comparatively minor effort in both personnel and material involved. However, a fact which is not generally appreciated, and which should be emphasized, is that a large percentage of these operations was carried out by uniformed special forces and not by clandestine agents.

These are but a few examples



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New dimension for penetration

taken from World War II to illustrate how special forces have been used in the past. Only one failure has been quoted but there were, of course, many others.

Bearing in mind the very small expenditure in personnel and materiel and the small cost to the war effort as a whole, it would appear that these forces paid a high dividend.

But there were weaknesses. Perhaps the greatest of which was the lack of higher direction and control. There were many instances where several such forces were operating in

the same theater without their activities being in any way coordinated. This led to confusion and wasted effort.

It is also worthy of note here that 80 per cent of the special operations carried out in World War II involved some sort of amphibious effort.

Then, if history indicates that in spite of certain weaknesses, forces of a special nature proved worthwhile in World War II, it seems logical to consider if and how they might be used in any future war and how the weaknesses which were apparent in the past could be rectified.

Will such forces be used in any future war?

In the early stages of a future war it seems probable, if not inevitable, that the Western Powers will be heavily outnumbered. It would appear that any action by such forces as have been described, which ties down enemy troops or disrupts his communications, is going to produce results out of all proportion to the numbers committed.

It has been argued that the disruption of communications can be done more efficiently by aerial or naval bombardment. There are, however, occasions on which the actual physical landing of troops—even in small numbers—has a morale lowering effect on the enemy which far exceeds anything achieved by bombardment. There are other factors to be considered in this connection. Really effective disruption of enemy communications pre-supposes air superiority on the part of the attacker. It seems very doubtful if this will be achieved in the early stages of any future war. As regards the physical efficiency of the two methods of disruption—two incidents from the past are worth mentioning.

At Annecy, France, during World War II, repeated air bombardment failed to hinder seriously the working of a ball bearing factory. Later three men with explosives and with the complicity of one or two of the workers, so damaged the machinery that the factory never produced another ball-bearing during the rest of the war.

On the East coast of Korea a small demolition party landed and destroyed the railway in a few hours, at a point where naval guns had attempted and failed to carry out the

same task in as many weeks.

As far as intelligence is concerned, we are going to need it and we are going to have to go and get it—possibly to an even greater degree than we have had to in the past.

Lastly, the aiding of resistance movements by uniformed special forces will certainly be as important, if not more so, as it was in World War II.

Surely, therefore, the need for such forces will be as great as it ever has been in the past.

Next—how will they be used? The strategical and tactical concept of their use may well adopt a similar pattern to that of World War II, but the advent of new equipment and techniques infinitely widens the scope for such operations. The development of the helicopter opens up a new field in deep penetration for raiding forces. One of the difficulties of dropping small parties by parachute was getting them out again. Now there is a ready-made answer.

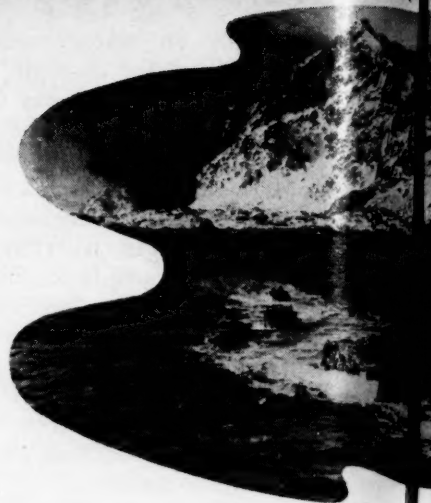
In World War II fleet submarines were used extensively for landing small parties on the enemy coast. However, the transport submarine, which was first used operationally in a raid on the East coast of Korea, provides a weapon of far greater potential. It should now be possible to land comparatively large forces from the sea, undetected by enemy radar. Great strides have also been made in developing equipment which will enable raiding forces to operate under arctic conditions for protracted periods.

These are but a few recent developments which should aid raiding or special forces of the future in the accomplishment of their missions.

In fact, there is not only every indication that such forces will be required in any future war, but that with improved equipment and techniques, their potentialities and range of action may well be increased.

If, then, there appears to be a requirement for the use of these forces in the future—how should this requirement be met and how should the weaknesses which were apparent in World War II be overcome?

In the first paragraph of this essay "Private Armies" were mentioned. These special forces came to be known as "Private Armies" because, in many instances, they were



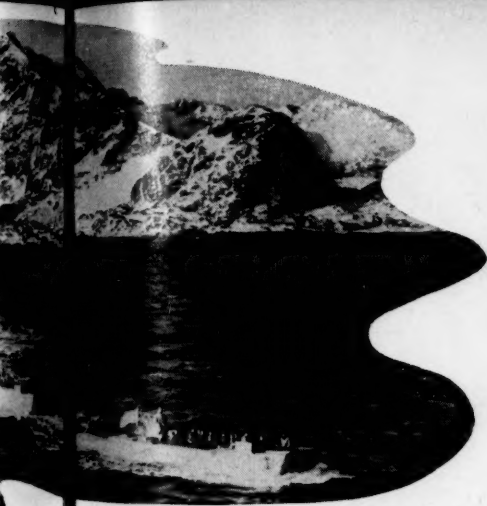
Raids like this in Norway . .

formed on the initiative of, and subsequently commanded by, unconventional individuals whose ideas and motives were regarded with some suspicion in the more orthodox military circles. For a variety of reasons these grew up like mushrooms during World War II. One very good reason was the desire of certain people to express their individuality or spirit of adventure. The fact must be faced that there were many people who led "Private Armies" in World War II and who did a great deal for the war effort, but whose characters just did not fit into more conventional formations.

However, "Private Armies" are not desirable. They become objects of suspicion to the public army; their leaders are apt to become irreplaceable, and they tend to get out of control. How much better to have a force in being to satisfy the need which gives rise to private armies in war. The great advantage of so doing lies less in the interest of the unit itself, than in the interests of the command and staff who have to handle such units. If they are kept going in peace, so that their handling and maintenance have passed the empirical stage, such forces are likely to be used in war with less frustration at the sharp end and less frenzy at the blunt.

One of the major weaknesses of Special Forces in World War II was the lack of higher direction and control. The aim in the future must, therefore, be to meet the needs, both personal and national, which give rise to private armies and thus prevent their mushroom growth in war.

Before this aim can be met, four



British Info. Services

set back Germany's atomic potential

questions must be answered:

- (a) What type of force is required?
- (b) Should this force be maintained in time of peace?
- (c) How should such a force be directed and controlled?
- (d) Who should provide the force?

What type of force is required? There is a strong school of thought which believes that this type of operation can be undertaken by orthodox units or formations. Certainly these tasks can be accomplished by orthodox units, provided they are given additional specialized training.

However, this solution is not entirely desirable for three reasons:

1. The type of adventurous spirit that has just been mentioned is not drawn towards an orthodox unit which may, from time to time, carry out special operations as a sideline. Past experience has proved that, unless you trap this particular type of individual into some recognized force, he will find ways and means of starting a private army which is just what we are trying to avoid.

2. These types of operations will inevitably be taking place concurrently with major operations of a more orthodox nature, which would mean that units or formations would have to be pulled out of the regular battle line to undertake such tasks. This is undesirable in that such action is naturally resented by higher commanders in the field, and results in argument and less attention being paid to special operations, or even their complete abandonment.

3. Finally, if this solution is adopted, it follows from the previous paragraph that the raiding force commanders concerned would be

unable to give these special operations the thought and study which they require.

For these reasons, a specially trained and equipped force, flexibly organized in order to meet the requirements of special operations, is required. It has been argued that the formation of such a specialized force would be uneconomical in that it would attract potential officer and NCO material away from more orthodox elements, where they can all be spared; and would therefore be recruited at the expense of those units who will be bearing the main brunt of the battle. Up to a point this is true, but the special force envisaged would be very small when compared with the fully mobilized forces of the nation. The high grade manpower required should not materially detract from the fighting efficiency of other service units.

Should this force be maintained in time of peace? If the requirement exists in time of war, it is logical that the weapon should be fashioned in time of peace. There are many reasons which support this:

(a) These forces are likely to prove most valuable in the opening stages of any future war. If they are to be available then (and they never have been in the past) they must be trained and organized in peacetime.

(b) If the mushroom growth of private armies is to be prevented, a ready made organization should be available at the outbreak of war which will attract the adventurous spirit or individualist.

(c) Commands and staffs would become accustomed to handling such forces as a matter of routine thus obviating the "suspicion," "frustration" and "frenzy!"

(d) Finally, proper study would be given to such operations with proper training being carried out in peace—thus lessening the chances of having to re-learn old lessons as happened both in World War II and in Korea.

How should such a force be directed and controlled? This is the crux of the whole matter because, without proper control from the top, these operations lose 75 per cent of their value. The question of the echelon on which the control of such forces should be vested depends largely on how deep they are operating. When these forces are operating

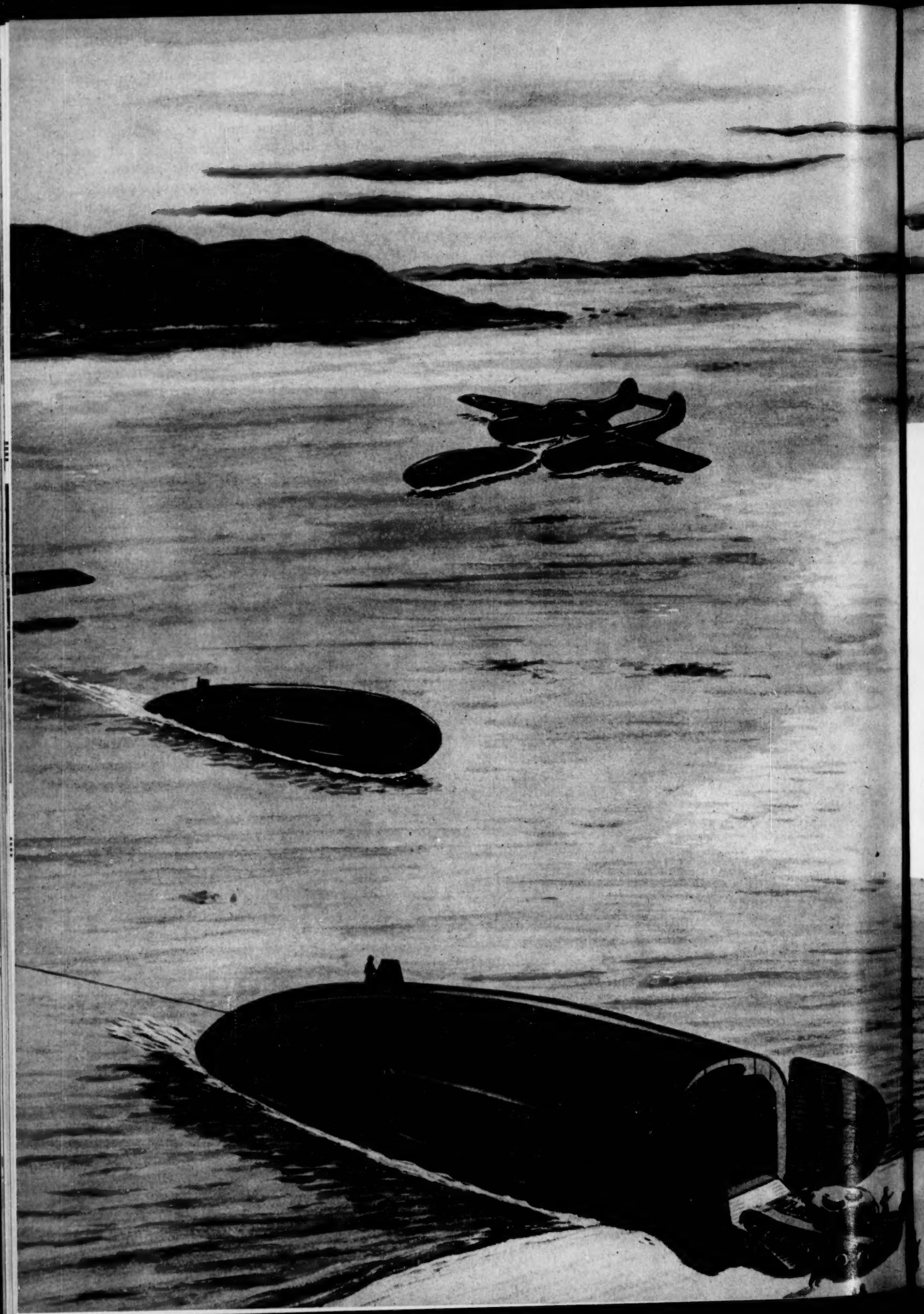
in what can be described as the interests of a particular command, its commander should be in control of them. That is to say, any commander should be given control over the forces operating in an area in which the results of their work would have some impact on his battle. The deeper you go—the higher the control will be. Generally speaking, a small staff section on each theater level with the responsibility for planning special operations and controlling such special forces as may be allotted to it, would seem to be most suitable. This system would work equally well if the armies concerned were international and the special forces drawn from more than one nation.

Who should provide the force? It has been argued that it would be quite impossible for a force with such a diversity of tasks to be brought into being and controlled by any one service. However, as has been pointed out earlier, over 80 per cent of the special operations in World War II were of an amphibious nature. The remainder involved an approach or assault from the air. Surely, in the USMC there already exists the essential amphibious experience, the knowledge gained from extensive experiments with the helicopter and the transport submarine and, above all, the right type of man. Here, at any rate, is a ready made nucleus which could be formed now and would be ready to expand in time of war when specialists, technicians and linguists would have to be recruited and the "adventurer" would be ripe for plucking. It is of interest to note that the British Royal Marines have appreciated the need for such forces; have, in being, Commandos and small scale raiding units specifically designed for this task, and are studying the problems of the future.

I believe that World War II proved special forces were both necessary and successful, but could have done even better had they been available at the beginning of the war when they were urgently required, and had they been properly coordinated and controlled throughout.

I believe that special forces will be required in any future war but, if full value is to be obtained from their services, they must be formed now.

US MC





CONSIDER THIS CONCEPT

To expand our amphibious potential, how about seaplanes for the assault?

THE MARINE CORPS IS RESPONSIBLE, by law, for the development of landing force tactics and techniques. In compliance with this directive we have established a development center with its equipment board and tactics and techniques study groups. Of late years, we have tentatively opened the door to another type of ship-to-shore movement — helicopters.

Commander Utgroff, USN, in a recent issue of *Naval Institute Proceedings* suggests a variation of the

air-borne type of ship-to-shore movement that is well worth some serious thought — movement by seaplane. I propose, in this paper, to look at some of the pros and cons of seaplane operations when used as, or in conjunction with, an amphibious landing.


Basically, there are two types of landings — opposed and unopposed. Let's look at the latter first, since it is by far the simplest. The *pros* in the case apparently are:

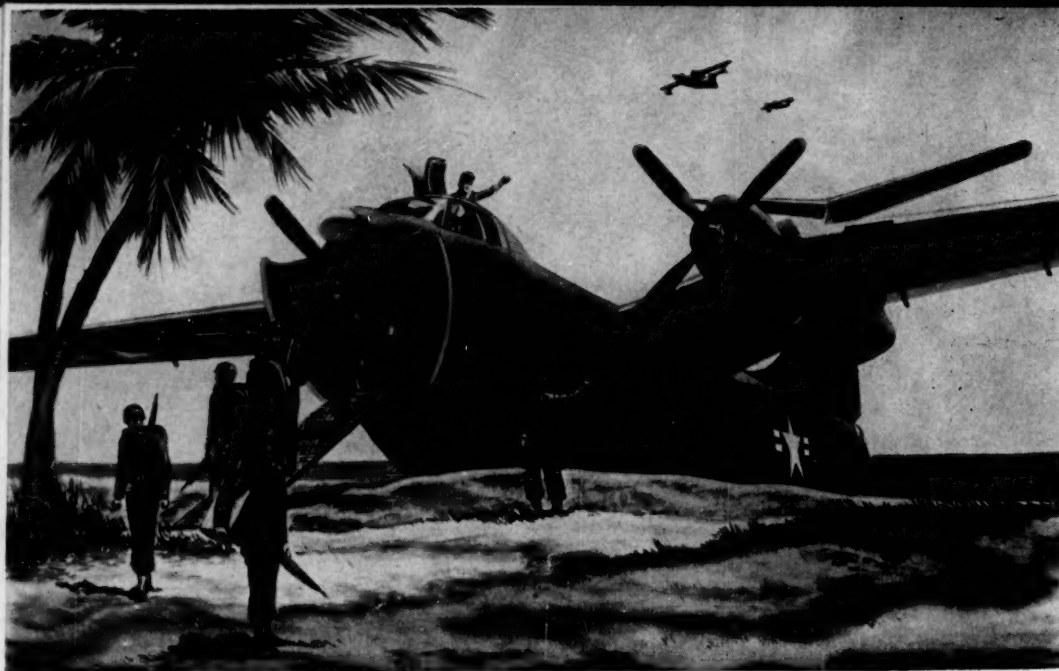
Speed: Troops move from point

of embarkation to landing site at 125 knots or better, rather than 18 to 20. Advantages of this from the point of view of the personnel are obvious: it minimizes the chance of discovery and enhances the opportunity for surprise.

Security: The menace of submarines and surface vessels is almost eliminated. Detection is more difficult until within radar range, and even then destination determination by the enemy is difficult because of the nature of the force and the ease

By Col Howard B. Bengé





Left—A 1947 artist's version of the Martin P5M-2 assault transport. It was designed to carry 55 fully equipped troops in an uncrowded seating arrangement. For casualty evacuation, the aircraft could carry 40 litter patients.

with which that force can change direction.

Elasticity: Here the vast water area of the world becomes important. The seaplane is not limited to the sea. Rivers, reservoirs, lakes and bays are all available. This is a major favorable point. A landing well inland is entirely feasible. This could be the sole basis for an unopposed landing behind a fortified beach to assist in a later amphibious landing—or a complete operation in itself. The fact that water is the landing area opens up many more alternate sites as well as eliminating the funnel of moving forces through the same narrow beach.

Other: Water is everywhere. The places to which seaplane-borne forces can go is practically unlimited. The present stage of development of hydroplane fighters means that airstrips are available wherever there is water or marsh. Marsh can be dammed much faster than airstrips can be constructed, and the water strip is almost indestructible.

It can be argued that, in the case of an unopposed landing, all the pros of an airborne force are not required. This is not so. It may be that the use of seaplane-borne forces is the reason a landing is not contested, because of the speed and security possible in the approach phase or because of the possibility of landing on rivers and lakes inland from defended beaches.

The cons for the uncontested landing appear more numerous than the

pros and, at first glance, insurmountable. However, let's drag them out and see what they look like in daylight.

Lack of equipment: We have no planes with the proper configuration for seaplane landing operations. The planes that are available are too few in numbers to mount out an operation of this type in the size that the Marine Corps must be prepared to execute. There is little equipment available that is suitable for use in seaplanes, even if they were available in the required numbers and of the proper design.

Greater Cost: The number of planes required to mount a large force, plus the fuel consumed and the personnel required to support these planes, would cost far more than a conventional ship-borne type movement of similar size. Also, re-supply, if contemplated by plane, becomes a major problem cost-wise.

Security: Vulnerability to attack by aircraft is much greater than if water-borne. While bombers and torpedo planes are required against ships, all types of aircraft may be used against seaplane transports. Early warning by radar normally provides sufficient time for defending planes to meet the attack force prior to its arrival at the destination.

Support: Necessity exists for more carrier support than for a water-borne operation though for a shorter period. Re-supply, if by ship, is the same and would also require its protection by covering forces.

Loading: The number of planes that must be used would require a wide dispersal of loading areas with the subsequent diminution of control. Large quantities of special loading equipment would then be necessary, spread through many areas with the attendant problem of fueling and manning those loading points.

Unloading: In this area, tactics and techniques must be developed in order to enable many small units (seaplane transports) to land troops and equipment in small zones and in large quantities so that troop commanders can initiate normal company, battalion, etc., operations rapidly. Unloading, in itself, becomes a major problem. Beaching aircraft, turning them around, congested landing and take-off areas—all are involved along with heavy requirements for unloading equipment and on-station command posts.

At this point it would seem to be futile to continue any further in the face of such staggering problems presented by the concept of landing forces by means of seaplanes. Nevertheless, these problems, like most, are easier to solve when looked at in detail.

The first, and the greatest, problem facing this theory is the present lack of equipment. Actually, this isn't so bad. American ingenuity and production capability can answer the questions of planes and equipment if a requirement should exist. That is, apparently, a rather

casual way of disposing of some rather awesome difficulties. But they are not impossible to solve. For the sake of this discussion, it can be assumed that if this type of operation should become necessary, then the tools to do the job can be designed and constructed. In reality, this is a good way to approach a new theory — everything designed for the job rather than attempting to adapt existing type equipment to revised concepts of older basic theories.

In like fashion the cost must be glossed over. Though a look at present prices on ships, LVTs, tanks and artillery makes it hard to conceive of how anything similar, but smaller and lighter, could be anything but cheaper. The logic in dismissing the cost as a valid objection is based on the idea that if this concept of landing operations were accepted, then, as old equipment wore out it would be replaced by the new. Also, certain financial compensations are visible even in this superficial examination. Example: If seaplanes can beach and drop a ramp, the requirement for LVTs is reduced (amtracs cost \$190,000 to \$275,000 apiece). The same type comparison can be carried out with the cost of several seaplane transports versus the reduced requirement for ships. It would probably cost a lot — but not as much as it would seem at first thought. Any increased cost would be spread over a period of several years, cutting down the impact on the annual appropriation request.

Having thus lightly disposed of the heavy arguments by the assumption that a requirement exists and the gear can be made, other more tangible problems can be dealt with.

Security: The only method by which immunity to air attack is obtained is to eliminate the enemy air capability. We have been successful in making amphibious operations in the face of air attacks ranging from harassing to all-out. In all cases, friendly control of the air solved the difficulties. Any operation of this type will naturally call for adequate air support, particularly during the final period of the approach phase and during the actual landing itself. But, since no cargo or transport vessels will be involved, protection of the landing force can be confined to a short period of time. Additionally,

the speed of a seaplane as compared to that of a ship is considerably greater, making it harder to find and destroy. When considering losses, the loss of a ship or two is far more serious than would be the loss of several seaplanes. All told then, movement by air of a large force, complete with supplies, should be safer than movement of a comparable force by water . . . at the very least, as safe as a water movement.

Support: Covered partly in the remarks on security, support appears to be no problem in the landing phase. Re-supply, if the landing force immediately goes into active combat, can be taken over by the conventional ship method if beaches are available. However, if this landing is inland or has no beach available, re-supply by air is entirely feasible. This has been proven in recent hostilities except for the re-supply of heavy equipment. Since we have

Editorial Note

All illustrations for this article were based on design studies made by the Glenn L. Martin Company in 1947. None of these models were ever produced, but research continues.

assumed earlier that proper air-transportable equipment is available for this operation, then aerial re-supply can be handled by relatively few planes. Extremely short turnaround times also permit augmentation by the initial lift aircraft.

Loading: This problem is primarily one of technique. First, properly designed planes must be capable of flying non-stop from the normal home station to the target. Granting the availability of the correct type of plane, the actual landing presents no great difficulty. Again, the use of seaplanes proves itself — no expensive complex of harbors to build nor expensive-to-maintain air strips to construct. Any available water can be used by simple damming, or, in the case of major rivers and lakes, little is required except loading ramps and access roads. Some mooring gear, boats and means of fueling

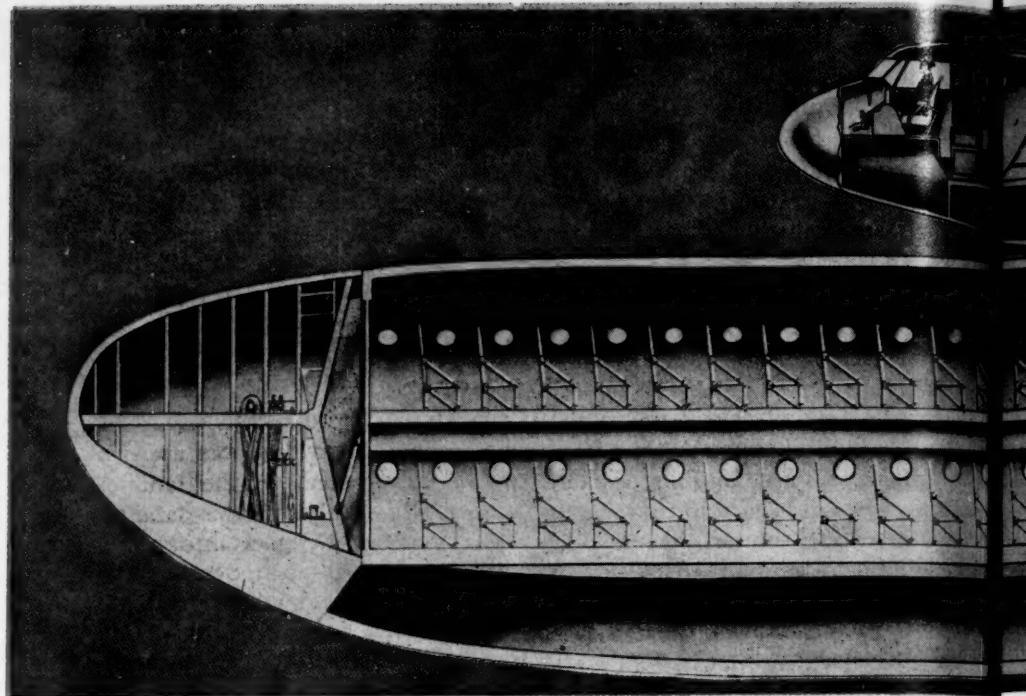
planes are obviously necessary, but for that type work, even present day equipment should suffice. That leaves, then, only the question of technique. Long-range planes can be loaded at more areas on the west and east coasts (not including either ocean) than the Marine Corps would need. Troops and equipment could be spotted in a matter of a couple of days and loaded within hours. All of this would mean that site surveys would have to be made, roads built, and special loading equipment spotted well in advance of the operation. If this type movement were ever contemplated as a standard means of operation, then all the preliminaries would be done in peacetime as a matter of readiness.

This isn't the only possibility, though it does conjure up some interesting situations. Consider, for example, the boating of the re-supply shipments and the replacement drafts, and watch them leave ten to fifteen days before the landing force loads in planes.

A shorter haul by plane might be either desirable or necessary. In that case, movement of the landing force by ship to a friendly area nearer the target is possible. This maneuver complicates the loading because of the impossibility of pre-siting special loading equipment, supplies and fuel. But again, remember, the greater part of the world is covered by water, significant portions of which are located inland from the great oceans we normally think of when speaking of water. The loading sites are available in quantity.

A short haul by plane might also be effected by loading the landing force in its planes at sea. Ships could be reverse combat loaded for trans-loading into equipment-carrying planes. Fueling of planes at sea is normal procedure today so that phase would be complicated only by numbers. Certainly dispersal would present no problem — the entire ocean would be available. True, weather would have a great influence on trans-loading from ship to plane. But — weather that would prevent that type maneuver (considering the planes as the ideals we accepted earlier) would, for the same reasons, prevent a normal amphibious landing. By being at sea for the short ship-to-plane haul, it should be possible to avoid bad weather. The

Right—The hull arrangement for a projected assault seaplane transport. It is called the 242-2, and is a twin-float seaplane equipped with a detachable, self-propelled central cargo hull which becomes an assault boat when cast off the seaplane after landing is made.



mobility of the planes lends itself to rapid, last minute plan changes that might completely forestall an amphibious operation.

Unloading: The actual physical difficulties of unloading are not too great. The proper design of the plane and special equipment such as buoys, rafts for floating supply dumps, fuel handling gear, etc., are available under the basic assumptions. Beyond that, it becomes a matter of working out landing patterns to fit the landing peculiarities and maintenance of a steady flow of unloading. Congestion in the approach to the beach should be pretty well eliminated by use of control planes orbiting on station, at regular intervals from the beach to the base of operations. The speed and mobility of the transports in this case should make the routing and control much simpler since the intervals are so large that changes can be directed and enacted with a lack of the crowding that sometimes takes place off a beach. Circling in the air over a rendezvous point 25 miles away from the target is a lot simpler and safer than bobbing up and down a few hundred yards off shore.

At the present moment, assault by seaplane-borne Marines is not possible. Nonetheless, in the light of this brief survey, assault by seaplane-borne Marines appears to be entirely feasible and well worth some serious thought. But, we've only looked at

half the picture when we finish with unopposed landing discussions; the other half is liable to prove much more difficult to solve.

The advantages and disadvantages discussed above for uncontested landings apply, generally, to the combat landing. Starting with the well worn assumption that American know-how and production capability can produce the required type plane in sufficient quantity for our purposes, it is easy to see the advantages of seaplane-borne landing forces.

Speed: This, perhaps, is of major importance. At least it is more important in this type of landing than in an uncontested one. In combat speed is of the essence.

Security: One helps the other. Speed materially assists the security of an assault force by reducing the time utilized in passing through that zone where you are subject to enemy attacks with no means of fighting back, except through the supporting naval and air forces. Security is much more important in a combat situation than in the uncontested landing discussed previously, primarily from a point of view of accomplishing a mission.

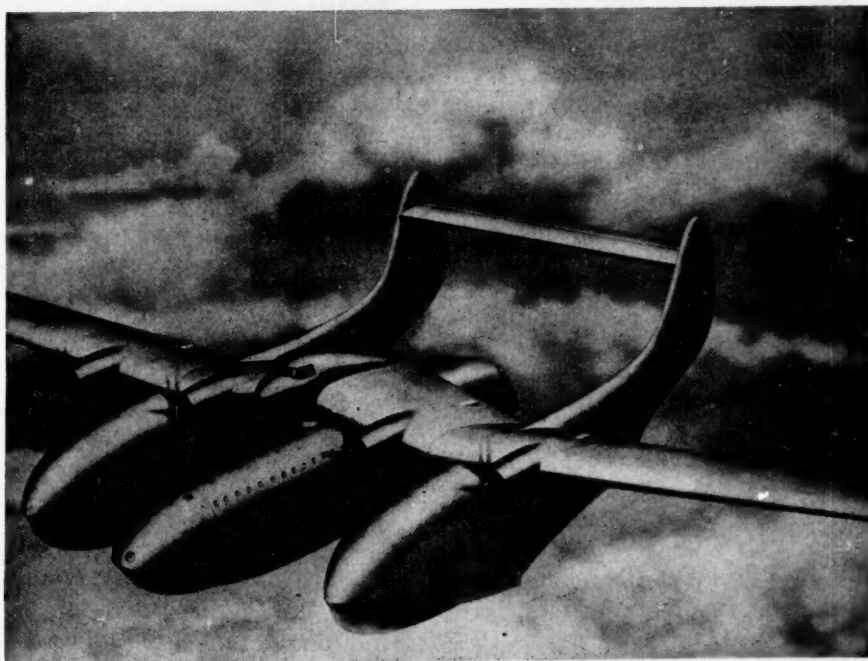
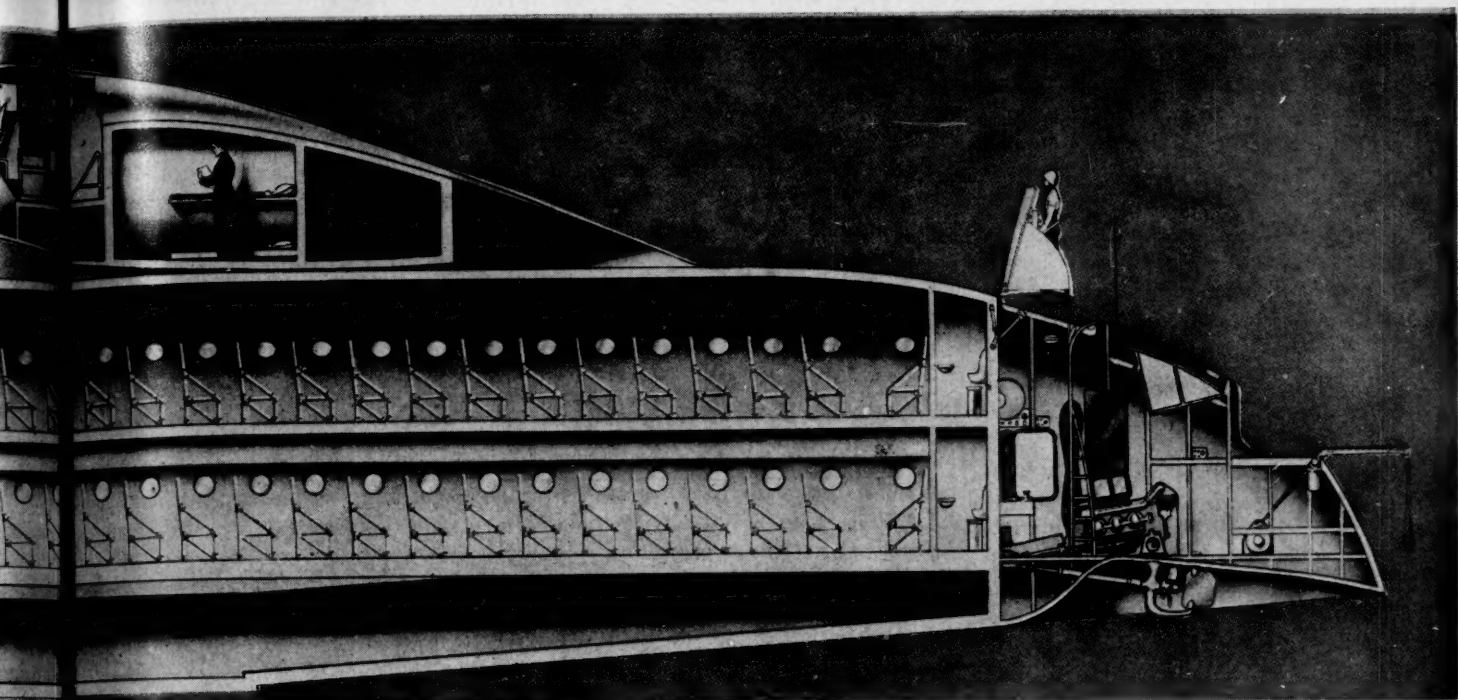
Elasticity: Here we have a great boon to commanders—the ability to go somewhere else or do something else that does not require days to accomplish. Amphibious operations are pretty ponderous. The amphibious

pattern is fairly well established and, once started, is practically impossible to change so that the ability to improvise and improve during the course of the battle is negligible. Seaplane-borne operations, while stylized to some degree, would be much more susceptible to on-the-spot changes to meet changes in the situation. In this type maneuver we have many small units available, each capable of being diverted over great distances at high speeds, regardless of ocean or ground, right up to almost the minute they become committed.

Support: Combat support from the Navy is a heavy requirement. The time period, however, is much shorter in the approach phase, permitting a last minute massing of air cover that would not be possible with a ship movement. Supply support is subject to the interpretations made earlier for uncontested landings.

Loading: This area requires no additional remarks because of combat operations except, perhaps, to note that combat loading for an assault landing will require more planes than for an unopposed landing.

Unloading: Here's the rub. If this one paragraph is impossible, the rest of the discussion is wasted words. This landing may be either on the ocean or on inland waters. In any case, if the enemy is still there and able to fight back, our assumption



The 242-2, with cargo hull attached

that we built planes and equipment for this type operation must also assume that the enemy is well aware of our capability. Accordingly, he is well fixed with anti-aircraft weapons. So — we're on the way and he is expecting us. But where can he expect us? Beaches suitable for amphibious operations of the size we're thinking of can be spotted and defended heavily. But seaplanes can go anywhere there's water. The defense then must spread to include rivers, bays, lakes, reservoirs and inundated marshes. Look at the maps — the detail maps. It would mean, for the enemies we're now considering, a national defense of all water capable of receiving planes. Is such a defense possible? In some measure, yes. But the bulk of the defense must then be made up of local forces not capable of withstanding modern combat. While weapon and personnel density in probable areas would no doubt be heavy, it couldn't be absolute. Other considerations must be made, too. The assault craft would be moving at high speed while in the air and, once on the water, its movement from impact area to unloading would be rapid — as would withdrawal. Thus, the time in the vulnerable zone is minimized. Combined use of smoke and radar in effecting landings also cannot be overlooked. The pre-assault bombardment would have to be by aircraft. In an operation such as this,

the main advantage of airborne forces — surprise — must be utilized to the utmost. It would be this factor, more than any other, that would determine success. The sequence of this type of operation would be the sudden unleashing of an overwhelming attack by all types of aircraft using every weapon in their arsenal. While the attack is going on, the seaplane transports come down and taxi to the beaches, either from an ocean or from a body of fresh water. Once an area on a beach is secured,

the water area in the rear becomes the air strip for the local air support.

The length of this article does not permit a detailed examination of the tactics, techniques, equipment and supplies required for seaplane-borne landing operations. Nor is it the purpose of this presentation to attempt to solve problems such a concept would create. The purpose of this writing is to raise a question in each Marine's mind — what can be done to foster new amphibious development?

US MC

passing in review

BOOKS OF
INTEREST TO
OUR READERS

One of 40,000 . . .

THE EXECUTION OF PRIVATE SLOV-
VIK—William Bradford Huie. 150
pages. New York: New Am. Lib. 25c

Of 10,110,103 Americans who were inducted for military service during World War II, only 2,670,000 were trained for actual ground combat. Of these, approximately a million men managed to escape combat by such devices as bad-conduct discharges, self-inflicted wounds, or by being excused by psychiatrists for some form of mental insufficiency.

Among those who evaded combat were some 40,000 who deserted before the enemy. Most of this number were tried by lesser courts-martial and confined in disciplinary training centers or dishonorably discharged. A total of 2,864 of these were tried by general courts-martial and received sentences of from 20 years to death. Forty-nine death sentences were approved by convening authorities. *One was executed!*

On Armistice Day 1944, a division court-martial of the 28th Inf Div gave Private Eddie D. Slovik the death sentence. On November 27, 1944 the division commander approved the sentence. On December 23, 1944 General Eisenhower gave final confirmation of the death sentence. On January 31, 1945 Slovik was executed.

The last American to assume responsibility in such a case had been Abraham Lincoln. The last West Pointer, acting for the United States, had been General Winfield Scott. Since 1864 a death sentence for desertion had not been executed. Why, out of 40,000 deserters, was Slovik picked to be "shot to death by musketry?"

In an attempt to answer this "why," nearly 11 years after the execution of Slovik, William Bradford Huie was given permission by the Judge Advocate General to see every document dealing with the

Case for the United States against this one Army private.

The Execution of Private Slovik is the result of careful study of those documents, and of interviews with nearly all the principals involved in the case—from Slovik's wife to his supervisor at the reformatory at Iona, Michigan, his close associates in the Army, his company, regi-



mental and division commanders, the members of the firing squad who shot him, the priest who attended him during his last hours and the members of the Board of Review who checked the record of his trial for legality. Author Huie paints a somber and compelling picture of Slovik's early life in the slums of Detroit, his almost ten years in a reformatory, his eventual parole in 1942, and of the only real happiness Slovik was to know . . . one year of marriage . . . from November 7, 1942 to November 7, 1943, the day he was re-classified from 4-F to 1-A and sent into the Army. Slovik's letters to his wife . . . the anguished outpourings of a man who thought

of himself as America's most inconvenienced individual, are included.

The Execution of Private Slovik has terrific impact, and should be read and thoroughly digested by every thinking American, both military and civilian. Here, in clear, moving language, is the story not only of Slovik who paid in full for deliberate avoidance of duty, but also of a country which has pampered and confused its youth to the extent that it is not sure of its duty to itself, or to its country. The final, inescapable question which the Slovik case poses for every thoughtful American is this: What of DUTY in 1954? What of AVOIDANCE of duty? In a world in which each generation must still, by force of arms, maintain its right to be free, how can we make certain that Americans will honor their duty to the United States and be willing to make the efforts and sacrifices?

Reviewed by Major G. P. Averill

High Flyers . . .

WORLDS IN SPACE—Martin Caidin, 212 pages, illustrated. New York: Henry Holt & Co. \$4.95

If you are one who still believes that the world of space belongs exclusively to the Children's Hour on TV, Martin Caidin's *Worlds in Space* will shatter your complacency. With competent assurance the author develops and demonstrates his theme: "We are but one step short of the conquest of space."

Of immediate interest to military men is the recapitulation of the rocket progress made by the Germans at the experimental center at Peenemünde. Subsequent American missile research owes much to these transplanted German origins. Unfortunately, because of security requirements, the American missile picture is conjecture after 1949.

Caidin's facility with technical description makes it easy to learn from this book about rocket characteristics, the theory of space travel and the

weird physical phenomenon of outer space. It would have been helpful to service readers, who must keep abreast of developments in so many fields, if the military application of today's missiles, prototypes of tomorrow's space ships, had been more adequately treated.

After the initial survey, the author moves ahead to the host of technical and human problems that must be solved before man finally masters space. The reaction of the human body to weightlessness, or zero

gravity; the perils of prolonged periods of extreme acceleration, and the complications that will accompany living and moving in a space ship are graphically forecast. A surprising amount of military experimentation has been done with the physiological problems already posed by supersonic, high altitude flying; but the theoretical answers to space hazards will eventually have to be tested the hard way.

With these preliminaries disposed of, and after considerable technical

research is accomplished, "the great day for the flight into space will arrive." Initial space trips will blaze the trail for the establishment of a space satellite, the feasibility of which has been investigated by the Defense Department.

Worlds in Space is not fantasy. Although written in an optimistic vein, the book takes into account the many hurdles that man must overcome before the assault on space can succeed. The book is brilliantly illustrated with both photographs and drawings. Caidin has made space an intriguing subject.

Reviewed by LtCol W. R. Kintner



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Manuals Distilled...

INFANTRY UNIT LEADER'S GUIDE—

Captain Charles Multop, USA, and Lieutenant William C. Barrett, USA, 186 pages, illustrated. Harrisburg, Pennsylvania: Military Service Publishing Company. \$1.50

Several field manuals were distilled to run off this capsule tactical guide for infantry leaders. The result is a neat, light, hip-pocket size (slightly smaller than a field manual) book.

This guide provides thumb-nail doctrine for Army infantry units from squad through company.

The book is well illustrated, field manual style. It contains one section of schematic diagrams on such subjects as battalion in defense and radio nets.

A chapter on miscellaneous information for infantry unit leaders provides a ready reference for several vital subjects. The chapter covers subjects such as radiotelephone procedure, arm and hand signals, military symbols, etc.

A novel feature of this guide is the space provided for notes and pertinent items of unit standing operating procedures.

Reviewed by Major D. D. Nicholson, Jr.

Spies and Counterspies...

CONFEDERATE AGENT—A Discovery in History—James D. Horan. 326 pages, illustrated. New York: Crown Publishers, Inc. \$5.00

"It was but a small band of fanatical men but they were devoted to their cause. Included in their

schemes one finds Chicago and New York burned to the ground or turned into armed camps which could battle the United States troops. There were groups in Indiana, Iowa and Ohio, as well as Illinois and New York, which held clandestine meetings. Object of the entire movement was the overthrow of the United States Government." Sounds like an investigation of Communist activities in this country, doesn't it? Actually it is an account of the Confederate States of America plan to alleviate the military pressure on the South during the War Between the States.

Mr. Horan gives an account in this book which is guaranteed to make the reader sit up and take notice. With conclusive evidence to back every statement, he follows the career of some of the most efficient spies and espionage agents ever encountered. A young man named Hines, who served under the command of dashing Morgan, heads the group of characters who prove that truth is certainly, at times, much stranger than fiction. Prior to reaching his 23d year he had men openly

refusing to comply with the draft for Union forces in several states. He also had escaped from one of the most notorious prisons of history, and nearly had Chicago part of the Confederate camp.

All in all, this is a tale of fantastic espionage and counterespionage which makes much fiction look dull by comparison.

Reviewed by Captain P. E. Wilson

Whirly Bird Biography

CAVALRY OF THE SKY. By Lynn Montross, Foreword by General Lemuel C. Shepherd, Jr. 300 pages, Illustrated, Appendix, Bibliography, Index. New York: Harper and Brothers. \$3.00

We are fortunate that the latest contribution of the U. S. Marine Corps in the development of modern warfare is being fully reported less than one year after cessation of the hostilities which brought the concept to fruition. This concept is, of course, helicopter warfare. Lynn Montross chose as the title for his timely study of this concept,

Cavalry of the Sky, from the motto of HMR-161, the world's first transport helicopter squadron.

Montross masterfully sets the stage for the central theme of Marine helicopter tactics by charting two lines of development. Helicopter technical development is briefly, but completely, traced from the earliest drawings of Leonardo da Vinci to first working models of over 100 years ago, and then up through modern development through World War II. The Corps enters here with early attempts (Nicaragua in 1932) at tactical use of the autogiro, first cousin of the helicopter.

Over 20 years later, the smoke had hardly cleared over Hiroshima before the Marine Corps realized that a mass of amphibious and support shipping, so characteristic of an amphibious operation, was a prime target for enemy atomic weapons.

Finding a solution became uppermost in the minds of Marines. At the same time, the Marine Corps began to direct some attention to the still experimental helicopters for the performance of many battlefield odd jobs. Shortly thereafter, the helicopter was proposed and accepted as the answer to the need for dispersion in space. In addition, it would permit speedy concentration during the amphibious attack in the face of atomic weapons used defensively. It was an amazing decision since, at the time, helicopters were still largely experimental and the largest carried but two men.

By the start of the Korean War, it was possible to field a composite squadron of light, fixed wing aircraft and light helicopters. The latter did yeoman service in vital tasks of command liaison, reconnaissance, communications and casualty evacuation. This so impressed other services present, that increased procurement and use of helicopters by them was stimulated.

For the Marine who participated in the conception or the test of this revolutionary means of warfare, this book will serve as both a memento and a record, since names of all principal participants and all events are here. The historian or the man who merely wants to know "what" and "why" will be rewarded, for all the facts are presented accurately and in detail.

Reviewed by LtCol Brooke Nihert

Marine Corps Gazette • June, 1954

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Marine Corps Schools, Quantico, Va.

July 1944 . . .

THE RECAPTURE OF GUAM—Major O. R. Lodge, USMC, 214 pages, illustrated. Washington, D. C.: U. S. Government Printing Office. \$4.25

The Recapture of Guam is a factual book. Its main purpose is to record this action of World War II for posterity. It accomplishes this purpose in an admirable fashion.

The author sets the stage by briefly reviewing the strategic value of Guam, giving a thumb nail sketch of Guam's past and her peoples, and

describing the Japanese efforts in preparing the island for defense. The many difficulties encountered in the planning stage, the trials and tribulations of the assault troops, and the final battle against the Japanese and Guam's terrain, are well presented and documented.

Captured Japanese documents and extensive notes given the author by Lt. Col. Hideyuki Takeda, IJA, the Operations Officer of the Japanese Defense Force on Guam, are the basis for piecing together the Japanese action during the fighting.

Takeda's notes were of particular value to the author for setting the record straight on the now famous Japanese counter-attack against the 3d Mar Div on the 25th and 26th of July, 1944.

A "new look" has been given to the format of this, the twelfth in the series of Operational Monographs prepared by the Marine Corps. The excellent, well contoured maps are now included in a map section. They are all readily accessible to the reader as he follows the action throughout the book. The illustrations were selected to give the reader a better appreciation of the part Guam's rough terrain played in the fighting. The index is very well cross-referenced.

Throughout this book the author emphasizes the smooth teamwork that existed between the tactical troops and the supporting arms and services. The Commandant of the Marine Corps, General Lemuel C. Shepherd, Jr., aptly describes this teamwork in the foreword to this book when he states: "... The conquest of Guam was a decisive triumph of combined arms over a formidable Japanese defensive force which took full advantage of the island's rugged terrain."

The author, Major O. R. Lodge, USMC, writes with authority on this operation for he was there as a member of "How" Battery, 12th Marines. He deserves a resounding "Well Done" for the ease with which he records history in the pages of this book.

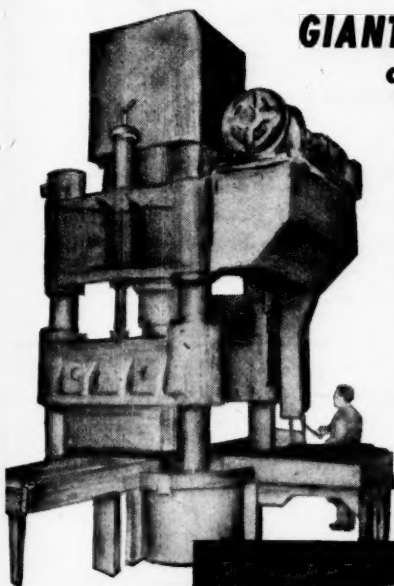
Reviewed by Colonel C. E. Todd

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Books on Parade

The Final Secret of Pearl Harbor
Rear Admiral Robert A. Theobald.
That F.D.R. alone was responsible for the helplessness of the Pacific fleet and the unpreparedness of Admiral Kimmel and General Short is the thesis of this book. That he had ample advance warning of the attack on Pearl Harbor, which he failed to pass on to Kimmel and Short, is proved beyond question. \$3.50

On War Karl von Clausewitz. Accepted internationally as the classic study on the philosophy and strategy

of war. This is the first complete and unabridged modern translation.

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Aircraft Carrier Lt Comdr J. Bryan, III. Different from any war book you have read, this is the intensely real journal of a first-rate writer who makes graphic the hardships of the war and the simple, sheer magnificence of the men who won it. \$3.00

The Reason Why Cecil Woodham-Smith. The author tells the extraordinary story behind one of the most fantastic blunders in military history—the terrible and tragic defeat of the famous Light Brigade during the Crimean War. \$4.00

The Story of Colt's Revolver: The Biography of Col Samuel Colt William B. Edwards. An excellent biography of the man who gave his name to the firearm on which Colt's fame rests. \$10.00

China Trader A. H. Rasmussen. The book lifts you up from the American environment and sets you down in the mystic land of China. Mr. Rasmussen describes his adventures so graphically that the reader feels every adventure has been his. \$3.95

Tarawa Robert Sherrod. A new edition of the original text. It speaks not of tactics, plans or strategy, but of men; their courage, sacrifice and fear. The new publication is supplemented with letters written ten years after Tarawa, by officers who planned and led the assault. \$3.50

ED: The publication of the Tenth Anniversary Edition of Tarawa—The Story of a Battle is a tribute to Marines who lost their lives on Tarawa's beaches. A portion of the price of every book sold has been earmarked to help lay the foundation for a fund with which the 2d Marine Division Association will finance college education for deserving sons and daughters of the Division's heroic dead.

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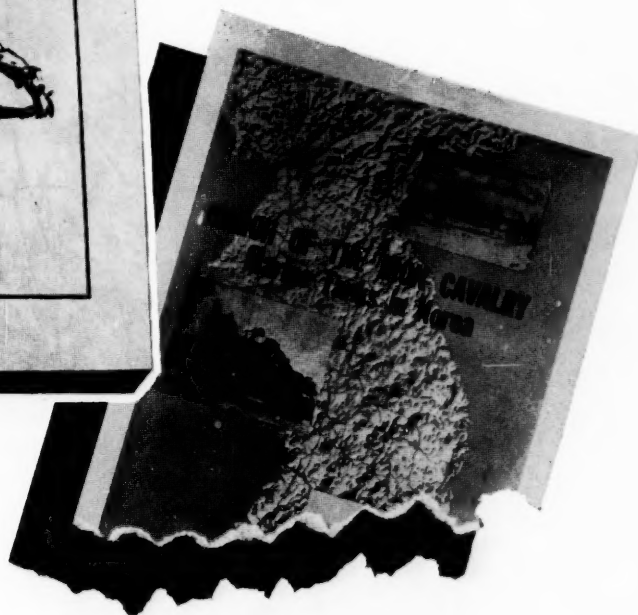
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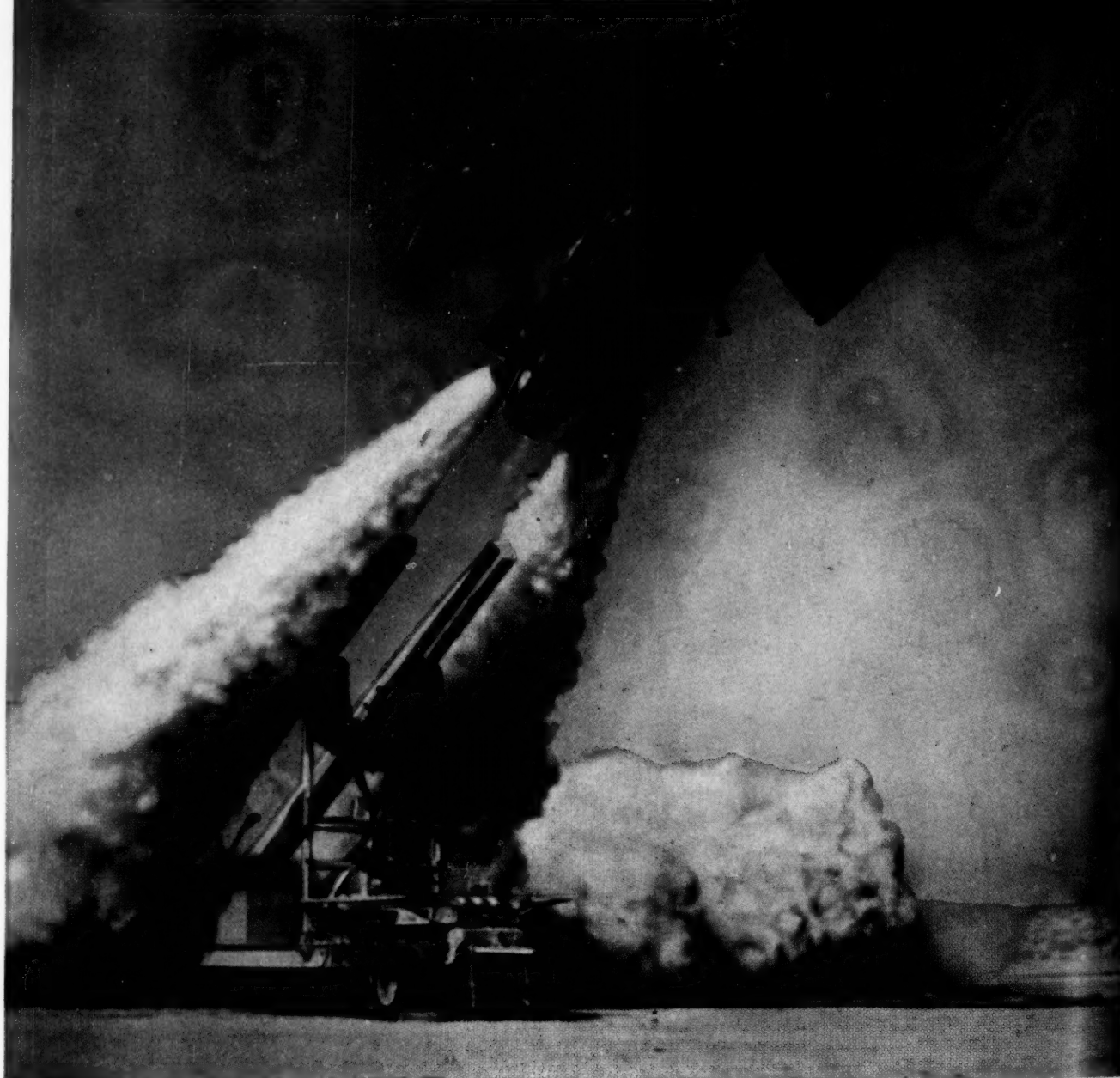
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